



## CITY OF CARLISLE.

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## REPORT

ON THE

### Sanitary Condition of the City of Carlisle,

FOR THE YEAR 1912

BY

JOSEPH BEARD,  
D.P.H. (Cantab.), F.R.S. (Edin.)

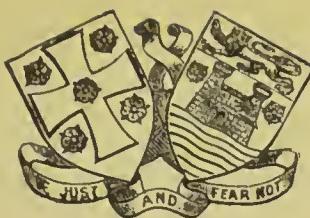
Fellow of the Royal College of Surgeons, Edinburgh ;  
Member of the Royal College of Surgeons, England ;  
Licentiate of the Royal College of Physicians, London.

Medical Officer of Health,  
School Medical Officer and  
Surgeon to the Police Force.

CARLISLE :

CHAS. THURNAM & SONS, PRINTERS, ENGLISH STREET.





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HEALTH COMMITTEE  
OF THE  
CARLISLE CITY COUNCIL, 1912—1913.

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MR. ALDERMAN DALTON, Deputy Chairman.

MR. COUNCILLOR EDMONDSON

MR. COUNCILLOR RIDLEY

“ “ FITZSIMMONS

“ “ D. THOMSON

“ “ HODGSON

“ “ M. THOMPSON

“ “ HUTCHINSON

“ “ WRIGHT

and

HIS WORSHIP THE MAYOR (COUNCILLOR SPENCER C. FERGUSON, J.P.).

OFFICIALS AND OTHERS CONNECTED WITH THE  
PUBLIC HEALTH DEPARTMENT.

---

*Medical Officer of Health.*

JOSEPH BEARD, F.R.C.S.(Edin.), M.R.C.S.(Eng.), L.R.C.P. (Lond.),  
D.P.H. (Cantab.), F.R.S. (Edin.)

*Chief Sanitary Inspector, and Inspector under Sale of Food  
and Drugs and Shops Acts.*

\*C. W. HILL.

*Assistant Inspectors.*

\*GEO. W. HARRISON.

EDWARD S. BROADHEAD.

*Health Visitor.*

Miss J. ROGERSON.

*Clerical Staff.*

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RICHARD F. THOBURN.

*Disinfecto<sup>r</sup>, &c.*

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*Superintendent of Public Slaughter-houses.*

JOHN DODDS.

*Veterinary Surgeon.*

R. CRAIG ROBINSON, M.R.C.V.S.

*Public Analyst.*

ROBERT HELLON, Ph.D., F.I.C.

*Bacteriologist.*

PROF. S. DELEPINE, M.B., C.M., M.Sc., &c.

\*Certificated Inspectors.

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To the Chairman and Members of the Health  
Committee of the Carlisle City Council.

Mr. Chairman and Gentlemen,

I have the honour to submit, in accordance with the Regulations and Memoranda of the Local Government Board, my Annual Report upon the Health and Sanitary Condition of the City of Carlisle during 1912.

The Report deals with the Birth and Mortality Statistics, and the work carried out during the year, including the measures adopted against the prevention of epidemic and other diseases.

The Confirmation of Extension Act came into force on November 9th, so that the period between November 9th and the end of the year has also been dealt with, and as far as possible the statistics arranged so as to avoid errors which would be likely to occur as a result of the short proportion of the year for which the figures for the added area are available.

I have to thank you for your support during the year.

I am, Mr. Chairman and Gentlemen,  
Your obedient Servant,  
JOSEPH BEARD.

Health Department,  
19 Fisher Street, Carlisle,  
25th April, 1913.

**Statistical Summary for the Year, including  
figures for the Extended City. .**

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Area in Acres	...	...	...	...	4,610
Population	...	...	...	...	52,225
Population per acre (Density)		...	...	...	11·1
Number of Families or separate Occupiers		...	...	...	11,360
Rateable Value	...	...	...	...	£256,965
Number of Inhabitants per House	...	...	...	...	4·5
Birth-rate per 1,000 living	...	...	...	...	20·2
Death-rate per 1,000 living	...	...	...	...	14·0
Infant Mortality Rate	...	...	...	...	104·4
Percentage of Uncertified Deaths	...	...	...	...	2·0
Total Deaths from Diarrhoea	...	...	...	...	14
Phthisis, Death-rate per 1,000 living	...	...	...	...	1·2
Infectious Cases Notified (including Phthisis, 385 cases)					639
Infectious Cases Isolated at the Fever Hospital	...	...	...	...	148
Total Rainfall in inches	...	...	...	...	30·01

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**STATISTICS**

RELATING TO

BIRTHS, DEATHS, AND CAUSES OF

DEATHS, &c.

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Statistical Summary for the year 1912, showing (A) the rate which would have obtained had the old City existed to the end of the year, and (B) the rate after inclusion of the figures from the 9th November to the end of the year.

	A	B
Population ... ...	46,420	52,225
Birth-Rate per 1,000, living ...	24·6	20·2
Death-Rate per 1,000, living ... (after exclusion of Non-residents)	16·6	14·0
Infant Mortality per 1,000 births ...	102·4	104·4
Zymotic Death-Rate ...	1·7	1·5
Respiratory Diseases Death-Rate ...	2·6	2·1
Phthisis Death-Rate per 1,000, living	1·4	1·2
Other Tuberculous Diseases Death-Rate	·2	·2
Malignant Diseases Death-Rate ...	1·3	1·2

### BIRTHS.

The number of births registered during the year was 1,149, of which 604 were males and 545 females; being an increase of 40 births over the figure for 1911.

Calculating upon the population of the extended City, viz., 52,225, the birth-rate for 1912 was 20.2 per 1,000; a decrease of 1.3 per 1,000 upon the year 1911.

Excluding the 7 births which took place in the added portion of the City between the 9th November and the end of the year, the number of births registered was 1,142, an increase of 33 over the figure for 1911, which, calculated upon the population of the old City, 46,420, gives a birth-rate of 24.6 per 1,000; this figure may be taken for all practical purposes to represent the birth-rate per 1,000 of the population of the City during 1912.

Year.	Number of Births Registered			Total.
	Males.	Females.	Birth-rate per 1,000 of the population.	
1911	563	546	23·8	1109
1912	604 { Old City 601 Added area 3	545 { Old City 541 Added area 4	24·6 Old City 20·2 with extension	1142 Old City 1149 with extension

The birth-rate for England and Wales, calculated as a whole, during 1912 was 23.8 per 1,000, and for the 95 great towns 24.9 per 1,000.

The 146 smaller towns (among which Carlisle is still included) show an average birth-rate of 23.8 per 1,000, whilst the rate for England and Wales, less the 241 great and small towns, was 22.6 per 1,000.

#### ILLEGITIMATE BIRTHS.

The number of illegitimate births registered, all of which occurred in the old City, was 65, or 56.9 per 1,000 of the total births.

The distribution to the two Registration Sub-Districts was as follows:—

St. Cuthbert's—33, or 50.7 per 1,000 of the total births in that district.

St. Mary's—32, or 64.4 per 1,000 of the total births in that district.

The number of illegitimate births shows an increase of 5 over the figure for 1911, which was 60, or 54.1 per 1,000 of the total births registered.

In previous years I have been impressed with the number of mothers of illegitimate children who come from parts outside into Carlisle in order to be confined, for the reason, I presume, that they may more easily hide their misfortune.

Upon investigating the figures for 1912 I find that in 20 instances, which is equal to 30.7 per cent. of the total illegitimate births, the mother was not a resident of the City.

Table showing details of the Births in the several Sub-  
Registration Districts, 1912.

QUARTER ENDING.	ST. MARY.		ST. CUTHBERT.		STANWIX.		DALSTON.		WETHERAL.		TOTALS FOR CITY.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
March 31.....	88	77	78	61	...	...	...	...	...	...	304
June 30.....	82	75	62	58	...	...	...	...	...	...	277
September 30	84	73	71	58	...	...	...	...	...	...	286
December 31...	67	84	69	55	3	4	...	...	...	...	282
Totals.....	321	309	280	232	3	4	...	...	...	...	1149

The following table shows the number of births registered, and the annual birth-rate per 1,000 living at all ages, in Carlisle since 1875, the earliest record available :—

<i>Year.</i>	<i>No. of Births Registered.</i>	<i>Birth-rate.</i>	<i>Year.</i>	<i>No. of Births Registered.</i>	<i>Birth-rate.</i>
1875	... 1,136	35.5	1894	... 1,315	32.0
1876	... 1,236	38.6	1895	... 1,311	31.4
1877	... 1,265	38.5	1896	... 1,246	29.6
1878	... 1,347	38.7	1897	... 1,324	30.8
1879	... 1,319	37.7	1898	... 1,311	30.0
1880	... 1,288	37.0	1899	— 1,300	29.4
*1881	... 1,291	36.0	1900	... 1,354	30.1
1882	... 1,272	35.3	*1901	... 1,246	27.3
1883	... 1,229	32.3	1902	... 1,245	27.0
1884	... 1,303	35.0	1903	... 1,322	28.4
1885	... 1,285	34.0	1904	... 1,278	26.9
1886	... 1,262	33.0	1905	... 1,168	24.3
1887	... 1,214	31.3	1906	... 1,227	25.3
1888	... 1,307	33.5	1907	... 1,178	23.8
1889	... 1,224	30.6	1908	... 1,223	24.4
1890	... 1,215	30.0	1909	... 1,149	22.6
*1891	... 1,207	30.8	1910	... 1,145	22.2
1892	... 1,213	30.5	*1911	... 1,109	23.8
1893	... 1,389	34.5	†1912	... 1,142	24.6

\* Census years.

† Old City.

## DEATHS.

The total number of deaths registered in the extended City during 1912 was 823, as compared with 776 in the old City in 1911, making a gross death-rate for the year under review, calculated upon the population of the extended City—52,225, of 15.7 per 1,000 of the population living at all ages.

Excluding ten deaths which took place in the added portion of the City between the 9th November and the end of the year, the number registered was 813, an increase of 37 over the figure for 1911, which, calculated upon the population of the old City—46,420—gives a gross death-rate of 17.5 per 1,000 living at all ages.

Twenty-three deaths occurred of persons belonging to the City in institutions and other places outside, while the deaths of 63 persons not belonging to the City occurred in public institutions and other places within the City.

Including the 23 deaths of Carlisle citizens dying in outside districts, and excluding the 63 deaths of non-residents, a net figure of 773 for the old City is obtained which, calculated upon the old population—46,420—gives a net death-rate of 16.6 per 1,000 living at all ages, which may be taken to represent the net death-rate per 1,000 of the population of the City.

The corrected death-rate for the whole of England and Wales for 1912 was 14.3 per 1,000 living at all ages, and for the 95 great towns 14.6 per 1,000, the death-rate for the 146 smaller towns (amongst which Carlisle figures) was 13.0 per 1,000, whilst the death-rate for England and Wales (less the 241 great and small towns) was 12.1 per 1,000 living.

Table showing details of the Deaths in the several Sub-  
Registration Districts, 1912.

QUARTER ENDING.	ST. MARY.		ST. CUTHBERT.		STANWIX.		DALSTON.		WETHERAL.		TOTALS FOR CITY.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
March 31	17	52	9	49	12	27	8	36	...	...	210	
June 30	30	12	44	13	40	8	32	8	34	...	191	
Sept. 30	14	44	5	38	12	21	15	16	...	...	165	
Dec.	31	26	56	24	56	16	29	11	29	2	257	
TOTALS	69	196	51	183	48	109	42	115	2	1	823	

Table showing the number of Deaths at all Ages and at several Age periods.

No. of Deaths at all ages and at several age periods ...	All Ages.	Under 1 Year.	St. Mary's.			St. Cuthbert's.			Stanwix.			Daleston.	Wetheral.
			1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up- wards.						
823	121	92	34	50	317	209	499	314	8	2	...	...	...

Number of deaths of persons not belonging to the district occurring in public institutions and other places within the City :—

Cumberland Infirmary	...	...	...	37
Fusehill Workhouse	...	...	...	5
Private Nursing Homes	...	...	...	5
Stratchclyde House	...	...	...	4
Fever Hospital	...	...	...	1
River Street	...	...	...	1
Botchergate	...	...	...	1
Melbourne Road	...	...	...	1
Scotch Street	...	...	...	1
Grosvenor Gardens	...	...	...	1
English Street	...	...	...	1
Water Street	...	...	...	1
Howe Street	...	...	...	1
Court Square	...	...	...	1
Thompson Street	...	...	...	1
Stoney Holme	...	...	...	1
				—
				63
				—

Number of deaths of persons belonging to the district occurring in public institutions and other places outside the City :—

Garlands Asylum	...	...	...	...	14
Near Penrith	...	...	...	...	2
Near Whitrigg, Bowness	...	...	...	...	1
Cheadle Asylum	...	...	...	...	1
Rockcliffe Marsh	...	...	...	...	1
Blackburn	...	...	...	...	1
Lazonby	...	...	...	...	1
Sunderland	...	...	...	...	1
Harrington	...	...	...	...	1
					—
					23
					—

Table showing Birth and Death-Rates as compared with England and Wales for the year.

	Annual Rate per 1,000 living.			Deaths under 1 Year to 1,000 Births.	
	Births.	Deaths.			
		Crude.	*Corrected		
England and Wales ... ... ... ...	23·8	13·3	13·3	95	
95 Great Towns ... ... ... ...	24·9	13·8	14·6	101	
146 Smaller Towns ... ... ... ...	23·8	12·4	13·0	99	
England and Wales, less the 241 Towns ...	22·6	12·9	12·1	86	
CARLISLE (Old City) . . . . .	24·6	17·5 †	16·6 ‡	102·4	

\* The corrected death-rates are the rates which would have been recorded had the age and sex constitution of the populations of the areas been identical with that of England and Wales, as enumerated in 1911.

† Includes deaths of Non-Residents in the City.

‡ As there is no factor for correction for this City, this figure represents the death-rate after exclusion of certain Non-Residents dying within the City, and the inclusion of certain residents dying outside the City.

Vital Statistics for the whole City during 1912 and five previous years.

YEAR.	Population estimated to Middle of each Year	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Uncorrected Number.	Nett. Number.	Rate.	Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 Year of age	At all Ages.		
1	2	3	4	5	6	7	8	9	10	11	12	13
1907	49,400	1178	...	23·8	848	17·1	62	21	169	143	807	16·3
1908	50,047	1223	...	24·4	713	14·2	55	13	158	129	671	13·4
1909	50,675	1149	...	22·6	735	14·5	53	27	142	123	709	13·9
1910	51,433	1145	...	22·2	683	13·2	63	28	125	110	648	12·6
1911	46,420	1109	-3	23·8	776	16·7	60	17	161	145	733	15·7
1912	52,225	1149	...	20·2	823	15·7	63	23	120	104·4	783	14·0

	1911.	With Extension 9th November, 1912.
Area of District in acres (exclusive of area covered by water). Census 1911 ...	2,025	4,610
Total population at all ages. Census 1911 ...	46,420	52,225
Number of families or separate occupiers. Census 1911 ... ... ...	10,181	11,360
Average number of persons per house. Census 1911 ... ... ... ...	4·5	4·5

The following public and other Institutions are within the City.

The Union Workhouse and its Infirmary.

The Cumberland Infirmary.

The Crozier Lodge Isolation Hospital.

Strathclyde House (Home for Incurables).

St. Joseph's Home.

Chadwick Memorial (Industrial School).

## Causes of, and Ages at Death during the Year.

CAUSES OF DEATH.		NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.										TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON-RESI- DENTS" IN INSTITUTIONS IN THE DISTRICT.
		All Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and up- wards		
1		2	3	4	5	6	7	8	9	10		11
All Causes	{ Certified	767	118	49	43	30	44	106	184	193		148
	Uncertified	16	2	...	...	...	1	1	5	8		.
Enteric Fever	...	1	...	...	...	...	...	1	...	...		2
Smallpox	...	...	...	...	...	...	...	...	...	...		...
Measles	...	39	6	19	11	3	...	...	...	...		1
Scarlet Fever	...	2	...	2	...	...	...	...	...	...		2
Whooping Cough	...	18	7	3	7	1	...	...	...	...		...
Diphtheria and Croup	...	6	...	2	3	...	1	...	...	...		2
Influenza	...	8	...	...	...	...	...	3	2	3		2
Erysipelas	...	2	...	...	...	...	...	2	2	...		...
Phthisis (Pulmonary Tuberculosis)	...	65	1	...	2	4	17	26	12	3		1
Tuberculous Meningitis	...	5	1	2	1	...	...	1	...	...		...
Other Tuberculous Diseases	...	6	1	2	...	...	2	...	...	1		2
Cancer, Malignant Disease	...	62	...	...	...	...	2	8	37	15		19
Rheumatic Fever	...	3	...	...	...	2	1	...	...	...		1
Meningitis	...	9	1	1	1	3	...	3	...	...		3
Organic Heart Disease	...	105	2	...	...	3	2	11	37	50		21
Bronchitis	...	39	10	...	...	...	...	...	6	23		1
Pneumonia (all forms)	...	77	15	9	9	2	4	7	17	14		2
Other Diseases of Respiratory Organs	...	9	...	...	...	...	...	2	5	2		1
Diarrhoea and Enteritis	...	14	11	3	...	...	...	...	...	...		...
Appendicitis and Typhlitis	...	6	...	...	...	2	1	1	2	...		7
Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...		...
Alcoholism	...	...	...	...	...	...	...	...	...	...		...
Nephritis and Bright's Disease	...	24	...	...	...	...	1	9	11	3		4
Puerperal Fever	...	3	...	...	...	...	2	1	...	...		1
Other Accidents and Diseases of Pregnancy and Parturition	...	6	...	...	...	...	4	2	...	...		...
Congenital Debility & Malformation, including Premature Birth	...	52	47	2	...	...	...	...	...	3		5
Violent Deaths, excluding Suicide	...	28	1	1	8	5	2	8	6	2		9
Suicide	...	5	...	...	...	...	...	2	3	...		2
Other Defined Diseases	...	188	17	2	6	5	5	22	49	82		60
Diseases ill-defined or unknown	...	1	...	1	...	...	...	...	...	...		...
		783	120	49	43	30	44	107	189	201		148
Sub-Entries included in above figures.	Cerebro-spinal Meningitis	1	...	...	1	...	...	1	...	...		...
	Poliomyelitis	1	...	...	1	...	...	1	...	...		...
	Typhus Fever	2	...	...	...	...	...	1	1	1		2
	Lobar Pneumonia	5	...	...	1	...	1	2	1	1		1
	Epidemic do.	1	...	...	...	...	...	...	...	1		...

Table showing the gross Death-rate from  
1874 to 1912 inclusive:—

Year.	Deaths from all causes.		Deaths from Principal Zymotic Diseases.	
	No. Registered.	Rate per 1000 of Population.	No. Registered.	Rate per 1000 of Population.
1874	1055	32·6	367	11·3
1875	934	29·2	201	6·3
1876	800	25·0	100	3·0
1877	750	23·0	55	1·7
1878	828	23·5	83	2·3
1879	818	23·5	76	2·0
1880	777	22·2	106	3·0
*1881	717	20·0	67	1·8
1882	852	23·6	189	5·0
1883	779	21·0	67	1·8
1884	783	21·0	38	1·0
1885	769	20·3	66	1·7
1886	745	19·4	62	1·6
1887	772	19·9	75	1·9
1888	722	18·5	59	1·5
1889	723	18·1	69	1·7
1890	792	19·5	65	1·6
*1891	789	20·1	63	1·6
1892	805	20·2	55	1·3
1893	868	21·6	145	3·6
1894	780	19·2	44	1·1
1895	794	19·4	33	0·8
1896	753	18·2	30	0·7
1897	811	19·4	54	1·3
1898	935	22·2	103	2·4
1899	818	19·2	42	0·9
1900	807	18·8	60	1·4
*1901	810	17·8	64	1·4
1902	856	18·5	82	1·7
1903	813	17·4	58	1·2
1904	933	19·7	63	1·3
1905	783	16·3	66	1·3
1906	811	16·7	34	0·7
1907	848	17·1	77	1·5
1908	713	14·2	42	0·8
1909	735	14·5	30	0·5
1910	683	13·2	21	0·4
*1911	776	16·7	96	2·06
+1912	813	17·5	81	1·7

\*Census Years.

†Old City.

Table showing the diseases causing the largest number of Deaths during 1912, and a comparison with those of 1911.

		1911.	1912.	Increase or Decrease
Pulmonary Tuberculosis & Phthisis	...	75	65	-10
Tuberculous Peritonitis and Tabes Mesenterica	{	8	3	-5
Tuberculous Meningitis and Hydrocephalus	{	7	5	-2
Cancer and Malignant Disease	...	45	61	+16
Prematurity and Injury at Birth	...	22	19	-3
Old Age	...	45	37	-8
Syncope, Heart Disease (not specified)	...	51	65	+14
Valvular Disease of Heart	...	34	33	-1
Cerebral Hæmorrhage, Embolism, Thrombosis and Apoplexy	{	45	33	-12
Pneumonia	...	71	75	+4
Bronchitis	...	27	38	+9
Kidney and Bladder Disease	...	24	24	
Debility, Atrophy, Inanition, & Marasmus		14	23	+9
Measles	...	13	38	+25
Diarrhœa	...	56	14	-42

+ Shows an increase.

- Shows a decrease.

Number and Nature of all Deaths Registered during the year.

Rabies (Hydrophobia) ...	2
Glanders, Farcy ...	...
Anthrax, Splenic Fever ...	...
Tetanus ...	...
Syphilis ...	2
Gonorrhœa ...	...
Puerperal Septicaemia — Sphaerema	...
Puerperal Pyæmia ...	...
Puerperal Phlegmasia Dolens ...	...
Puerperal Fever ...	...
Infective Endocarditis ...	...
Lobar ...	...
Broncho ...	...
Pneumonia { Epidemic ...	...
Not Defined ...	...
Erysipelas ...	...
Septicæmia Sphaerema (not Puerperal)	...
Pyæmia (not Puerperal)	...
Phlegmon, Carbuncle (not Anthrax)	...
Phagedæna ...	...
Cellulitis ...	...
Other Septic Diseases ...	...
Pulmonary Tuberculosis (Tuberculous Phthisis)	...
<i>Phthisis</i> ...	...
Tuberculous Meningitis	...
Tuberculous Peritonitis	...
Hydrocephalus ...	...
<i>Tubes Mesenterica</i> ...	...
Lupus ...	...
Tubercle of other Organs	...
General Tuberculosis ...	...
<i>Scrofula</i> ...	...
Parasitic Diseases ...	...

Number and Nature of all Deaths Registered during the year—*continued.*



Number and Nature of all Deaths Registered during the year—*continued.*

## *6.—Diseases of Digestive System.*

6.— <i>Diseases of Digestive System.</i>	1
Tonsilitis, Quinsy	4
Month, Pharynx, Disease (not specific)	...
Gastric Ulcer	...
<i>Gastritis, Gastric Catarrh</i>	...
Stomach, other Diseases(not Malignant)	1
Ulceration of Intestines	...
Enteritis (not Epidemic)	...
<i>Gastro-Enteritis</i>	...
Appendicitis, Perityphlitis	...
Hernia	...
Intestinal Obstruction	...
Other Diseases of Intestine	...
Peritonitis (not Puerperal)	...
Cirrhosis of Liver	...
Liver and Gall Bladder, other Diseases	...
Digestive System, other Diseases	3
7.— <i>Lymphatic Diseases.</i>	...
Spleen Disease	...
Lymph System, other Diseases	...
Thyroid, Body Disease	...
Supra Renal Capsules Disease	...
8.— <i>Diseases of Urinary System.</i>	...
Nephritis (Acute), Uraemia	...
Chronic Bright's Disease, Albuminuria	...
Calculus (not Biliary)	...
Bladder and Prostate Disease	...
Urinary System, other Diseases	...
9.— <i>Diseases of Generative System.</i>	...
Ovarian Tumour (not Malign.)	...
Other Diseases of Ovary	...
Uterine Tumour (not Malign.)	...
Other Diseases of Uterus and Vagina	...
Disorders of Menstruation	...
Generative and Mam. Orgs., other Diseases	1

Number and Nature of all Deaths Registered during the year—*continued.*

CAUSE OF DEATH.	AGES										TOTALS.
	0 to 1	1 to 2	2 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	
<b>II.—LOCAL DISEASES—<i>continued.</i></b>											
10.— <i>Accidents of Childbirth.</i>	...	...	...	...	...	...	...	...	...	...	...
Abortion, Miscarriage	...	...	...	...	...	...	...	...	...	...	...
Puerperal Mania	...	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions	...	...	...	...	...	...	...	...	...	...	...
Placenta Prævia, Flooding	...	...	...	...	...	1	...	...	...	...	1
Other Accidents of Pregnancy and Childbirth	...	...	...	...	...	4	1	...	...	...	5
11.— <i>Diseases of Bones and Joints.</i>	...	...	...	...	...	...	...	...	...	...	...
Caries, Necrosis	...	...	...	...	...	...	1	...	...	...	1
Arthritis, Periostitis	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Locomotor System	...	...	...	...	...	...	...	...	...	...	...
12.— <i>Skin Diseases.</i>	...	...	...	...	...	...	...	...	...	...	...
Ulcer, Bedsores	...	...	...	...	...	...	...	...	...	...	...
Eczema	...	...	...	...	...	...	...	...	...	...	...
Pemphigus	...	...	...	...	...	...	...	...	...	...	...
Skin Diseases, other	...	...	...	...	...	...	...	...	...	...	...
<b>III.—DEATHS FROM VIOLENCE.</b>											
1.— <i>Accident or Negligence.</i>	...	...	...	...	...	...	1	...	...	1	...
Fractures and Contusions	...	...	...	...	...	...	1	...	...	1	...
Gunshot Wounds	...	...	...	...	...	...	1	...	...	1	...
Cut, Stab	...	...	...	...	...	1	1	1	1	1	1
Burn, Scald	...	...	...	...	...	1	1	1	1	1	1



### INFANT MORTALITY.

This term is used as an interpretation of the mortality amongst infants under one year of age, and the mortality rate is calculated upon the number of deaths of such infants per 1,000 born during the same period.

The number of deaths of infants under one year registered in the extended City was 121, as compared with 161 in the old City in 1911, making a gross infant mortality rate of 105.3 per 1,000.

Excluding 3 deaths of infants which took place in the added portion of the City between the 9th November and the end of the year, and also the death of a non-resident infant, the number belonging to the old City was 117, a decrease of 44 over the figure for 1911, which, calculated upon the number of births registered in the old City, gives a figure of 102.4 per 1,000.

The infant mortality rate for the whole of England and Wales during 1912 was 95 per 1,000 born, for the 95 great towns 101 per 1,000, for the 146 smaller towns (of which Carlisle is one) 99 per 1,000, and for England and Wales, less the 241 great and small towns, 86 per 1,000.

The rate during 1912 shows that a decrease in Infant Mortality was general throughout England and Wales.

It will be observed that the Infant Mortality rate for the old City showed a marked fall during last year over the figure for 1911, this local decrease being principally influenced by the fall in the number of deaths from Diarrhoea and Pneumonia, and especially the former.

The death-rate amongst legitimate infants under one year of age for the old City was 103 per 1,000 legitimate births registered.

The death-rate amongst illegitimate infants under one year of age for the old City was 123 per 1,000 illegitimate births registered.

## Notification of Births Act, 1907.

### Summary of the Work carried out in connection therewith.

Number of live births notified by official letter card ...	...	998
Number of still births notified by official letter card ...	...	45
Number of births notified otherwise than by official letter card (all of which were live births) ...	...	49
Number of births in which the first notification was the Sub-Registrar's return ... ... ...	...	30
<hr/>		
Totals ...	...	1122
<hr/>		

Number of Infant deaths under one year ...	...	...	121
Number of deaths from Diarrhoea under one year ...	...	...	11
Total number of primary visits made by the Health Visitor to houses ... ... ...	...	...	1265
Total number of re-visits ... ... ...	...	...	1770
Number of visits in respect of other conditions, principally Measles and Whooping Cough ...	...	...	458

### PARTICULARS OF ENQUIRIES WITH RESPECT TO FEEDING.

Number of children fed entirely on the breast ...	...	913
" " " by means of hygienic (boat-shaped) bottle ...	97	122
" " " by means of long tubed bottle 25	25	
" " " partly breast and partly bottle ...	...	2
" " " by other means—Spoon (all premature) ...	...	10
" " " dying soon after birth and not fed	...	15

PARTICULARS SHOWING THE RELATION OF DEATHS  
TO FEEDING.

---

Number of deaths of breast-fed infants	42	or 4·6% of breast-fed infants
,,    ,,    ,,    bottle    ,,    ,,	49	or 40·1% of bottle fed infants
,,    ,,    ,,    infants fed by spoon	10	
Number of deaths of infants partly fed on breast and partly bottle	..	2
No information	..	..
Number dying soon after birth and not fed	15	
Total	...	120

---

CONDITION AS TO CLEANLINESS OF HOUSES  
VISITED.

---

Number of houses found to be clean	...	...	...	1018
,,    ,,    ,,    ,,    moderately clean	...	...	...	68
,,    ,,    ,,    ,,    dirty	...	...	...	10
Number of instances in which information was not obtainable				9
Houses not visited	..	..	..	17
Total	...	...	...	1122

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## INFANT MORTALITY.

## St. Mary's Sub-District.

Nett Deaths from stated causes at various ages under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 weeks.	4 Weeks & under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths under One Year.
All Causes.	{ Certified ... ..	13	5	3	1	22	11	8	15	8	64
	{ Uncertified ... ..	..	..	..	..	..	1	..	..	..	1
Small-pox ... ..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox ... ..	..	..	..	..	..	..	..	..	..	..	..
Measles ... ..	..	..	..	..	..	..	..	..	..	..	2
Scarlet Fever ... ..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough ... ..	..	..	..	..	..	..	..	..	..	..	4
Diphtheria and Croup ... ..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ... ..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis ... ..	..	..	..	..	..	..	..	..	..	..	1
Abdominal Tuberculosis ... ..	..	..	..	..	..	..	..	..	..	..	..
Other Tuberculous Diseases ... ..	..	..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous) ... ..	..	..	..	..	..	..	..	..	..	..	1
Convulsions ... ..	..	..	..	1	..	1	1	1	..	..	3
Laryngitis ... ..	..	..	..	..	..	..	..	..	..	..	..
Bronchitis ... ..	..	..	..	..	..	..	..	3	3	..	6
Pneumonia (all forms) ... ..	..	..	..	..	1	1	2	..	3	4	10
Diarrhoea ... ..	..	..	..	..	..	..	3	..	2	..	5
Enteritis ... ..	..	..	..	..	..	..	..	..	..	..	..
Gastritis ... ..	..	..	..	..	..	..	..	..	..	..	..
Syphilis ... ..	..	..	..	..	..	..	..	1	1	..	2
Rickets ... ..	..	..	..	..	..	..	..	..	..	..	..
Suffocation, overlying ... ..	..	..	..	..	..	..	..	..	..	..	..
Injury at Birth ... ..	..	1	..	..	..	1	..	..	..	..	1
Atelectasis ... ..	..	1	..	..	..	1	..	..	..	..	1
Congenital Malformations ... ..	1	..	1	..	..	2	2	..	..	..	4
Premature Birth ... ..	..	5	2	1	..	8	..	..	..	..	8
Atrophy, Debility & Marasmus ... ..	3	3	..	..	..	6	4	1	1	2	14
Other Causes ... ..	..	2	..	..	..	2	..	..	..	1	3
Totals ... ..	13	5	3	1	22	12	8	15	8	65	

Nett Births in the { Legitimate, 598.  
year. { Illegitimate, 32.

Nett Deaths in the { Legitimate Infants, 58.  
year of { Illegitimate " 7.



## INFANT MORTALITY.

## **Stanwix Sub-District.**

**Nett Deaths from stated causes at various ages under  
One Year of Age.**

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	4 Weeks & under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths under One Year.
All Causes	{ Certified Uncertified	...	...	...	...	...	1	...	...	2	3
Small-pox	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	1
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	...	...	...	1	1
Diarrhoea	...	...	...	...	...	...	...	...	...	...	...
Enteritis	...	...	...	...	...	...	...	...	...	...	...
Gastritis	...	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying	...	...	...	...	...	...	...	...	...	...	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...	...
Atelectasis	...	...	...	...	...	...	...	...	...	...	...
Congenital Malformations	...	...	...	...	...	...	...	...	...	...	...
Premature Birth	...	...	...	...	...	...	...	...	...	...	...
Atrophy, Debility, & Marasmus	...	...	...	...	...	...	...	1	...	...	...
Other Causes	...	...	...	...	...	...	...	...	...	...	1
Totals		...	...	...	...	...	1	...	2	3	
Nett Births in the year.		Legitimate, 7 Illegitimate ...	Nett Deaths in the year of		Legitimate Infants, 3. Illegitimate .....						

The deaths of infants belonging to the old City under one year of age are recorded under the following headings, arranged in order of their frequency :—

Atrophy, Debility, Inanition, Marasmus	...	18
Premature Birth	...	18
Pneumonia	...	14
Epidemic Diarrhoea, Epidemic (or Zymotic) Enteritis	...	11
Bronchitis	...	10
Whooping Cough	...	7
Congenital Defects	...	6
Atelectasis	...	5
Measles	...	5
Want of Breast Milk	...	5
Convulsions	...	4
Heart Failure	...	2
Congenital Syphilis	...	2
Icterus Neonatorum	...	2
Injury at Birth	...	1
Tuberculous Meningitis	...	1
Meningitis (not Tuberculous)	...	1
Suffocation (overlaid)	...	1
Phthisis	...	1
Rickets	...	1
Tabes Mesenterica	...	1
Jaundice of first born	...	1
		—
		117
		—

Three deaths belonging to the added portion of the City were as follows :—

Measles	...	...	...	...	...	1
Pneumonia	...	...	...	...	...	1
Congenital Hypertrophy and Spasm of Pylorus						1
						—
						3
						—

### Distribution of Deaths of Infants under 1 Year.

Whole District ...	...	$\left\{ \begin{array}{l} \text{Legitimate } 112 \\ \text{Illegitimate } 8 \end{array} \right\}$	120
St. Mary's Sub-Registration District ...		$\left\{ \begin{array}{l} \text{Legitimate } 58 \\ \text{Illegitimate } 7 \end{array} \right\}$	65
St. Cuthbert's Sub-Registration District		$\left\{ \begin{array}{l} \text{Legitimate } 51 \\ \text{Illegitimate } 1 \end{array} \right\}$	52
Stanwix Sub-Registration District ...		$\left\{ \begin{array}{l} \text{Legitimate } 3 \\ \text{Illegitimate } 0 \end{array} \right\}$	3
Dalston Sub-Registration District ...		Nil.	—
Wetheral Sub-Registration District ...		Nil.	—

**Occupation of Parents.****LEGITIMATE.****OLD CITY.**

Occupation of Father.	Numbers.
Labourer	25
Railway Employee	21
Joiner, Painter, Plumber, Builder, and Slater	11
Carter, Vanman, &c.	8
Clerk and Accountant	7
Draper, Hatter, and Hairdresser	6
Tailor, Cloth Finisher, and Warehouseman	6
Butcher, Cattle Drover	4
Shop Assistant and Bacon Curer	4
Insurance Agent	3
Barman	2
Lithographer	2
Auctioneer	2
Police Constable	1
Soldier	1
Basket Maker	1
Timekeeper	1
Ice Cream Maker	1
Moulder	1
Music Hall Artist	1
Postman	1
ADDED AREA.	
Manual Instructor	1
Shop Porter	1
Cabinet Maker	1
	112

**ILLEGITIMATE.****All occurred in the old City.**

Occupation of Mother.	Numbers.
Hawker	2
Machinist	2
Domestic Servant	1
Dressmaker	1
Field Worker	1
No Occupation	1
Total	8

Population, births, birth-rate, and infant mortality rates for a series of years, 1884-1912.

Year.	Population.	No. of Births.	Rate per 1000.	Infant Death-Rate per 1000 births.
1884	37,285	1303	35.0	158
1885	37,881	1285	34.0	164
1886	38,402	1262	33.0	146
1887	38,793	1214	31.3	141
1888	39,027	1307	33.5	129
1889	39,944	1224	30.6	142
1890	40,500	1215	30.0	150
*1891	39,200	1207	30.8	137
1892	39,750	1213	30.5	123
1893	40,150	1389	34.5	178
1894	41,022	1315	32.0	133
1895	41,658	1311	31.4	142
1896	42,294	1246	29.6	137
1897	42,930	1324	30.8	134
1898	43,566	1311	30.0	183
1899	44,202	1300	29.4	145
1900	44,838	1354	30.1	134
*1901	45,478	1246	27.3	129
1902	46,078	1245	27.0	117
1903	46,500	1322	28.4	118
1904	47,350	1278	26.7	152
1905	47,920	1168	24.3	139
1906	48,425	1227	25.3	132
1907	49,400	1178	23.8	143
1908	50,047	1223	24.4	129
1909	50,675	1149	22.6	123.6
1910	51,433	1145	22.2	110.0
*1911	46,432	1109	23.8	145.
†1912	46,420	1142	24.6	102.4

\*Census Population. †Old City.

Table showing population and rates from principal  
number of

NAME OF TOWN.	Population.	Birth-Rate.	Death-Rate. (after correc- tion for Non- Residents.)	Infantile Mortality Rate.
Accrington ...	45,031	18·75	11·77	76·7
Ashton-under-Lyne ...	45,179	23·3	16·8	126·0
Bath ...	69,173	16·7	12·9	76·0
Birmingham ...	840,202	26·1	14·1	111·0
Burton-on-Trent ...	48,275	22·10	12·62	69·0
Bury ...	59,100	20·81	14·18	112·0
Coventry ...	111,166	26·4	11·9	76·1
Crewe ...	45,342	22·5	12·6	82·0
Enfield ...	56,388	24·46	10·05	76·30
Gillingham ...	52,252	23·1	9·9	75·8
Hornsey ...	84,592	16·19	9·82	75·0
Ilford ...	78,188	19·4	8·3	63·0
Ipswich ...	73,932	23·1	15·2	113·0
Lancaster ...	41,554	22·14	12·90	95·0
Lincoln ...	57,294	23·7	12·6	102·6
Newport (Mon.) ...	83,691	26·95	13·12	109·7
Oxford ...	53,048	19·16	11·61	69·2
Rotherham ...	42,700	29·53	15·79	119·0
Stockton-on-Tees ...	52,158	30·6	15·6	91·0
Tynemouth ...	59,809	28·99	16·00	102·07
Wakefield ...	51,511	23·3	14·7	89·0
Walsall ...	81,000	22·1	11·6	76·0
Warrington ...	72,166	28·3	14·5	92·0
Wigan ...	90,504	28·59	15·91	125·0
Wimbledon ...	54,875	19·7	9·3	67·0
Workington ...	25,100	25·5	16·13	140·4
<b>CITY OF CARLISLE ...</b>	<b>46,420</b>	<b>24·6</b>	<b>16·6</b>	<b>102·4</b>

causes of death in Carlisle and a  
other towns.

Zymotic Death-Rate.	Respiratory Diseases, Death-Rate (other than Phthisis).	Phthisis Death-Rate.	Other Tuberculous Diseases, Death-Rate.	Malignant Diseases, Death-Rate.
0·35	1·72	0·79	0·37	0·64
1·4	4·0	1·1	0·2	—
0·65	2·11	0·89	0·13	1·36
—	2·68	1·28	0·24	0·93
0·41	1·93	1·37	0·41	0·76
0·86	2·47	1·30	0·44	0·71
1·35	1·90	1·03	0·30	0·67
1·47	2·02	0·83	0·46	0·97
0·69	1·51	0·69	0·26	0·76
0·7	1·4	0·9	0·2	0·5
0·35	—	0·502	0·198	1·33
0·46	0·9	0·55	0·16	0·9
1·62	2·34	1·21	0·44	1·148
0·67	2·46	1·06	0·46	—
1·02	1·8	0·95	0·2	1·06
1·31	2·52	0·89	0·28	0·82
0·504	1·58	0·84	0·205	1·04
2·22	2·45	0·87	0·45	0·88
1·35	2·52	1·22	0·87	0·89
1·34	2·8	1·67	0·46	0·73
1·03	2·68	1·17	0·27	0·65
0·7	1·9	0·8	0·3	1·0
2·07	2·39	1·12	0·39	0·8
1·34	4·02	0·72	0·74	0·58
0·58	1·2	0·8	0·12	1·07
2·5	2·4	1·11	1·03	1·11
<b>1·7</b>	<b>2·6</b>	<b>1·4</b>	<b>0·2</b>	<b>1·3</b>

## ZYMOTIC DISEASES.

(Syn. Infectious Diseases.)

The total number of cases of Infectious Disease notified in the extended City was 254, being an increase of 13 on the number notified in the old City during 1911.

Excluding a death which took place in the added portion of the City between the 9th November and the end of the year, the number of deaths registered was 81, which, calculated upon the population of the old City (46,420), gives a death-rate of 1.7 per 1,000, the causes of death being registered as follows:—

Measles	...	...	...	...	38
Whooping Cough	...	...	...	...	18
Diarrhoea	...	...	...	...	14
Diphtheria	...	...	...	...	6
Scarlet Fever	...	...	...	...	2
Typhus Fever	...	...	...	...	2
Enteric Fever	...	...	...	...	1
					—
					81
					—

The number of deaths from Zymotic Disease in 1910 and 1911 was 21 and 96 respectively.

Table showing the number and nature of Infectious Diseases at the several age groups notified in the several Sub-Registration Districts.

NOTIFIABLE DISEASE		At all ages.	Number of Cases Notified.									Total Cases Notified in each Locality.			TOTAL CASES REMOVED TO HOSPITAL.	
			At Ages—Years.									St. Mary's Sub- District.	St. Cuthbert's Sub-District.			
			Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.							
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cholera, Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria (in- cluding Mem- branous Croup)	...	47	...	13	14	9	11	...	..	...	31	16	..	33	33	
Erysipelas	...	76	4	2	4	9	24	24	9	42	34	...	...	3	3	
Scarlet Fever	...	110	1	34	66	6	3	...	...	81	28	1	102	102	9	
Typhus Fever	...	9	...	1	2	2	2	2	..	7	2	..	..	..	3	
Enteric Fever	...	3	...	...	1	...	2	...	..	3	...	...	...	...	3	
Relapsing Fever, Continued Fever	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	
Puerperal Fever	...	7	...	...	...	2	5	...	..	6	1	..	..	..	..	
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Poliomyelitis	...	2	...	2	...	..	..	...	...	1	1	..	..	..	..	
Pulmonary Tuberculosis	...	385	1	11	159	69	96	42	7	230	155	..	..	..	..	
Totals	...	639	6	63	246	97	143	68	16	401	237	1	150			

### **Isolation Hospital or Hospitals, Sanatoria, &c.**

Crozier Lodge, Newtown, Carlisle—Total Available Beds 50

Number of Diseases which can be concurrently treated, 4

Table showing the number of notifications during each of the four quarters of the year.

Notifiable Disease.	Number of Notifications sent in during				Totals.
	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	
Scarlet Fever ...	36	24	27	23	110*
Diphtheria (including Membranous Croup)	7	10	16	14	47
Erysipelas ..	18	15	22	21	76
Enteric or (Typhoid) Fever	1	0	0	2	3*
Typhus Fever ...	0	0	0	9	9
Smallpox ...	0	0	0	0	0
Puerperal Fever ...	3	1	1	2	7
Acute Poliomyelitis ...	1	0	1	0	2
Totals ...	66	50	67	71	254

\* One case of Enteric Fever and one case of Scarlet Fever occurred in the added area.

Total number of notifications of each class of notifiable Infectious Disease, 1910, 1911, 1912:—

Notifiable Disease.	1910	1911	1912†
Scarlet Fever ... ... ... ...	248	139	109
Diphtheria (including Membranous Croup) ... ... ... ...	37	44	47
Erysipelas ... ... ... ...	60	49	76
Enteric or (Typhoid) Fever ... ... ...	6	3	2
Typhus Fever ... ... ...	0	0	9
Smallpox ... ... ...	0	0	0
Puerperal Fever ... ... ...	6	6	7
Acute Poliomyelitis ... ... ...	0	0	2
Totals ... ... ...	357	241	252

† Old city.

Deaths from the principal Infectious Diseases, including Diarrhoea and Dysentry, 1908—1912:—

Year	1908	1909	1910	1911	1912†
Total number of deaths	42	30	21	96	81

† Old city.

Table showing the Number and Nature of the Deaths from the principal Zymotic Diseases, 1901 to 1912.

NOTIFIABLE DISEASE.	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	*1912
Smallpox .....	...	...	4	...	...	...	...	...	...	...	...	...
Measles.....	5	10	3	7	17	1	54	...	11	3	13	38
Scarlet Fever .....	6	17	5	3	5	9	6	1	6	2	2	2
Diphtheria .....	14	41	20	14	6	5	3	4	4	2	4	6
Whooping Cough.....	14	5	20	20	11	5	11	23	8	11	21	18
Typhus .....	..	7	3	3	5	..	..	..	1	...	...	2
Enteric or Typhoid	5	...	...	...	3	1	...	...	...	...	...	1
Simple continued	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhea .....	20	2	3	16	19	13	3	14	...	3	56	14
Totals .....	—	—	—	—	—	—	—	—	—	—	—	—
Rate per 1000 of	64	82	58	63	66	34	77	42	30	21	96	81
population.....	1.3	1.7	1.2	1.3	1.3	0.7	1.5	0.84	0.5	.40	2.06	1.7

\* Old City

Tables showing the several localities where deaths from the principal Zymotic Diseases occurred :—

LOCALITY.		Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria	Typhus Fever.	Enteric or (Typhoid) Fever.	Diarrhoea.	Totals.
Fever Hospital	...	1	2			2	2	1	...	8
Warwick Road	...	1						1	1	1
Milbourne Street	...							2	3	3
Sheffield Street	...			1						1
Church Street	...			1						1
Willow Holme	...		1	2						3
Lawson Street	...				1					1
Barwise Nook	...				1					1
Cranbourne Road	...				1					1
Queen Street	...	1			1				2	2
Rigg Street	...	4								6
Bridge Street	...	1								1
Isabella Street	...	1								1
Broadgnards	...	1								1
Caldewgate	...	3								3
Monkselose Road	...	1								1
Bright Street	...	1								1
Denton Crescent	...	1								1
Graham Street	...				1					1
Rickergate	...	1								1
Hawick Street	...					1				1
Trafalgar Street	...		1							1
Granville Road	...					1				1
Caldew Street	...		1							1
Holme Terrace	...								1	1
York Street	...		1							1
Randall Street	...		1							1
Metcalf Street	...				1					1
South John Street	...					1			1	1
Princess Street	...				1	1				2
Water Street	...	1							2	3
South Henry Street	...				1					1
Gloucester Road	...								1	1
Linton Street	...						1		1	1
Lindesfarne Street	...									1
Court Street	...		1							1
Crown Street	...		1							1
King Street	...		1		1					2
Brook Street	...		1							1
Botchergate	...		1						1	2
Ferguson's Lane	...				1					1
Robert Street	...				1					1
West Walls	...		1							1
Lancaster Street	...				1					1
William Street	...		2							2
Harraby Street	...		1							1
English Damside	...								1	1
Blackfriars Street	...		2							2
Lord Street	...		1							1
Union Street	...		1		1					2
South George Street	...		1							1
Margery Street	...								1	1
Redbank Terrace	...				1					1
South John Street	...		1							1
<b>Totals ...</b>		<b>38</b>	<b>2</b>	<b>18</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>14</b>	<b>81</b>	

## SCARLET FEVER.

(Syn. Scarlatina.)

The number of cases of Scarlet Fever notified or brought to my notice by other means during 1912 was 110, a decrease of 29 on the number notified during 1911.

Excluding a case which took place in the added portion of the City between the 9th November and the end of the year, the number of cases was 109.

The number of deaths registered was two, equal to a rate of .04 per 1,000 calculated upon the population of the old City, or 1.8 per cent. of the notified cases.

Of the 109 cases thus recorded, 101, or 92.6 per cent., were isolated in Hospital.

During 1911 two deaths were registered from this disease, or equal to a rate of .04 per 1,000 of the census population.

Out of the 110 cases notified as Scarlet Fever 6 were found not to be suffering from the disease, but were suffering from another disease as follows:—

Simple Fever	...	...	...	1
Rash due to Drug	...	...	...	1
Nettle Rash	...	...	...	1
Measles	...	...	...	3
Total				6

## RETURN CASES OF SCARLET FEVER.

Two cases of Scarlet Fever occurred in houses to which a patient recently isolated in Hospital had returned, as shown in the following table:—

Address.	Date of Notification of first case.	Date of Discharge of first case from Hospital.	Date of Notification of second cases at the same house.
Warwick Street	... ... 23rd Feb.	3rd April	22nd April
Bower Street	... ... 1st Aug.	8th Oct.	23rd Oct.

Table showing simultaneous and secondary cases of Scarlet Fever in the same house:—

Address.	Date of Notification of first case or cases.	Date of notification of a second or more cases at the same house.	Whether isolated in Hospital or not.
Shaddongate ... .. .	17th January	12th April	Yes
Union Street ... .. .	8th February	9th February	Yes
		12th February	Yes
		12th February	Yes
Union Court, Scotch Street...	9th February	...	Yes
	9th February	...	Yes
Charlotte Street ... ..	14th March	25th March	Yes
		26th March	Yes
		12th April	Yes
Court Street ... .. .	26th March	29th March	Yes
		6th April	Yes
Petteril Street ... ..	30th April	1st May	Yes
South Street ... ..	12th June	9th July	Yes
Chiswick Street ... ..	26th August	27th August	No
Bower Street ... ..	30th August	...	Yes
	30th August	...	Yes
Aglionby Street ... .. .	11th December	18th December	No
		25th December	No

Table showing yearly number of cases of Scarlet Fever notified since 1891:—

Year	No.	Year	No.	Year	No.
1891	564	1899	61	1907	177
1892	103	1900	99	1908	89
1893	181	1901	363	1909	119
1894	77	1902	280	1910	248
1895	64	1903	101	1911	139
1896	162	1904	180	1912	110
1897	258	1905	378		
1898	120	1906	670		

Table giving name of school and number of cases in which a school child was infected with Scarlet Fever during 1910, 1911, and 1912 :—

			1910	1911	1912
Ashley Street	...	...	23	8	16
Bishop Goodwin	...	...	22	9	1
Brook Street	...	...	34	4	6
Caldewgate	...	...	4	14	12
Christ Church	...	...	3	2	5
Denton Holme	...	...	2	3	1
Fawcett	...	...	2	4	0
Higher Grade	...	...	3	1	1
Holy Trinity	...	...	3	1	3
Lowther Street	...	...	12	2	3
Norman Street	...	...	14	7	2
Robert Ferguson	...	...	7	2	2
St. Bede's	...	...	2	2	2
St. Cuthbert's	...	...	3	5	4
St. John's	...	...	5	3	2
St. Patrick's	...	...	0	0	2
St. Stephen's	...	...	0	7	0
Botcherby	...	...	6	0	0
Stanwix	...	...	1	0	0
Upperby	...	...	0	0	0
Belle Vue	...	...	0	0	0
Private Schools	...	...	10	6	1
			—	—	—
			156	80	63
			—	—	—

## DIPHTHERIA.

(Including Membranous Croup).

The number of cases of Diphtheria (all of which occurred in the old City), notified was 47, as against 44 during 1911, and 37 during 1910.

Of these, 31 occurred in St. Mary's, and 16 in St. Cuthbert's Sub-Registration Districts respectively.

Out of the 47 cases notified 5 were found not to be suffering from the disease, but were suffering from another disease, as follows :—

Follicular Tonsilitis	...	...	2
Scarlet Fever	...	...	1
Measles	...	...	1
Sore Throat	...	...	1
		—	—
			5
		—	—

A sixth case occurred in an individual whose residence was outside the City, who ~~became~~ became infected at home, but whose occupation was within the City.

Six deaths were registered as due to this disease, the death-rate being equal to .17 per 1,000 of the population of the old City, or 12.7 per cent. of the cases notified.

Of the 41 actual cases of the disease, 33, or 80 per cent., were removed to the Isolation Hospital.

No return case occurred during the year.

## ANTITOXIN.

Three applications were made by medical men for the free supply of Anti-Diphtheric Serum, 8,000 units being supplied.

Table showing localities of cases of Diphtheria during the year, with action taken thereon:—

Date.	Locality.	Insanitary conditions present	Action taken.
1912 15th Jan.	Atkinson's Court, King Street	None	Removed to Isolation Hospital and subsequent disinfection
16th „ 8th Feb.	South Street Crescent Place, Denton Crescent	Do. Do.	Do. Do.
23rd „	Princess Street	Do.	Isolated at home and subsequent disinfection
26th „	Sybil Street	Do.	Removed to Isolation Hospital and subsequent disinfection
26th Mar. 6th May	Morton Terrace Goodwin Terrae	Do. Do.	Do.
20th „	Morton Terrace	Do.	Isolated at home and subsequent disinfection
22nd „	Do.	Do.	Removed to Isolation Hospital and subsequent disinfection
26th „	Irishgate Brow	Do.	Do.
27th „	Lindisfarne Street	None	Isolated at home and subsequent disinfection
31st „	Cumberland Infirmary Lodge	Do.	Removed to Isolation Hospital and subsequent disinfection
4th June	Thomson Street	Do.	Do.
10th „	Cumberland Infirmary	Do.	Do.
13th „	Bright Street	Do.	Do.
1st July	English Street	Do.	Do.
24th „	Corporation Road	Do.	Do.
24th „	Thomson's Court, Dacre Street	Do.	Do.
27th „	Trafalgar Street	Do.	Do.
28th „	Corporation Road	Do.	Do.
29th „	Currock Terrace	Do.	Do.
20th Aug.	Denton Street	Do.	Do.
21st „	E. Norfolk Street	Do.	Do.
26th „	Chiswick Street	Do.	Isolated at home and subsequent disinfection
27th „	Chiswick Street	Do.	Do.
5th Sept.	Warwick Road	Do.	Do.
10th „	Barwise Nook	Do.	Removed to Isolation Hospital and subsequent disinfection
15th „	Greystone Road	Do.	Do.
21st „	Lorne Street	Do.	Do.
25th „	Edward Street	Do.	Do.
21st Oct.	Hawick Street	Do.	Isolated at home and subsequent disinfection
22nd ..	Cranbourne Road	Defective brick paving	Removed to Isolation Hospital and subsequent disinfection
28th ..	Cumberland Infirmary	None	Isolated at the Cumberland Infirmary
4th Nov.	Granville Road	Do.	Isolated at home and subsequent disinfection
5th „	Colville Street	Do.	Do.
15th „	Thomson Street	Do.	Removed to Isolation Hospital and subsequent disinfection
21st „	Newcastle Street	Do.	Isolated at home and subsequent disinfection
24th „	Fuschill Street	Do.	Removed to Isolation Hospital and subsequent disinfection
27th „	Charles Street	Do.	Do.
7th Dec.	English Street	Do.	Do.
12th „	Newtown Road	Do.	Do.

Table giving name of school and number of cases in which a school child was infected with Diphtheria during 1910, 1911, & 1912:—

		1910	1911	1912
Ashley Street	...	...	2	1
Bishop Goodwin	...	...	1	2
Brook Street	...	...	1	3
Caldewgate	...	...	1	0
Christ Church	...	...	1	2
Denton Holme	...	...	1	0
Fawcett	...	...	1	1
Higher Grade	...	...	0	0
Holy Trinity	...	...	0	2
Lowther Street	...	...	0	1
Norman Street	...	...	1	2
Robert Ferguson	...	...	0	1
St. Bede's	...	...	0	0
St. Cuthbert's	...	...	2	1
St. John's	...	...	0	0
St. Patrick's	...	...	0	0
St. Stephen's	...	...	0	2
Botcherby	...	...	0	0
Stanwix	...	...	0	0
Upperby	...	...	0	0
Belle Vue	...	...	0	0
Private Schools	...	...	2	1
		13	19	12

### SMALLPOX.

The district was free from Smallpox during the year.

### PUERPERAL FEVER.

During the year seven cases were notified, and three deaths resulted from the disease.

In each case careful investigation was made, and all necessary precautions were taken, and where a midwife was attending, if deemed necessary, she was at once suspended, and the cleansing of her clothing, bag, and appliances carried out.

### MEASLES.

Thirty-nine deaths from this disease were registered which, calculated upon the population (52,225), gives a mortality rate of .74 per 1,000.

Excluding a death which took place in the added portion of the City between the 9th November and the end of the year, the number registered was 38, an increase of 25 over the figure for 1911, which, calculated upon the population of the old City (46,420), gives a mortality rate of .81 per 1,000.

The disease was very prevalent in the City throughout the whole year, but was most marked during the third and fourth quarters, when the deaths were as follows:—

First Quarter	...	...	...	0
Second ,,	...	...	...	1
Third ,,	...	...	...	19
Fourth ,,	...	...	...	19
			—	
			39	
			—	

## Seasonal relationship to death :—

June	...	...	1	October	...	...	10
July	...	...	3	November	...	...	4
August	...	...	1	December	...	...	5
September		...	15				

Death from measles is almost entirely confined to young life. The disease is very infectious, therefore too much care and caution cannot be exercised in isolating the affected children. Yet how many mothers treat the disease as a trifling ailment, and one which the child is bound to get; both these ideas are fallacious, for Measles is a most fatal infective disease in children, and responsible for an appalling loss of life every year. It is untrue to state that every child must take Measles, for many persons go through life without contracting the disease, and it is important to keep always in mind the fact that the longer the infant or young child can be protected, the less likely is he to contract the disease.

## SCHOOL CLOSURE.

During the year the following school departments were closed on account of the prevalence of measles.

School.	Closed.	Re-opened.
Holy Trinity Infants' School	... 19th Aug.	11th Sept.
Christ Church	do. ... 28th Aug.	20th Sept.
Caldewgate	do. ... 28th Aug.	20th Sept.
Holy Trinity	do. ... 11th Sept.	30th Sept.
St. Bede's	do. ... 10th Sept.	7th Oct.
Ashley Street	do. ... 24th Oct.	18th Nov.
Stanwix Council	do. ... 11th Nov.	25th Nov.

**Figures showing actual number of sufferers  
among school children from several non-notifi-  
able diseases.**

Name of School (All Departments)	Measles.	Chicken Pox.	Whooping Cough.	Mumps.	Total.
Ashley Street ...	128	54	13	6	201
Bishop Goodwin...	76	10	33	3	122
Brook Street ...	88	16	27	16	147
Caldewgate ...	73	38	7	3	121
Christ Church ...	64	...	4	...	68
Denton Holme ...	13	6	5	3	27
Fawcett ...	12	...	1	...	13
Higher Grade ...	2	...	...	...	2
Holy Trinity ...	39	8	5	2	54
Lowther Street ...	35	19	33	1	88
Norman Street ...	52	82	26	...	160
Robert Ferguson...	94	31	36	9	170
St. Bede's ...	63	9	7	2	81
St. Cuthbert's ...	23	3	11	4	41
St. John's ...	3	1	...	3	7
St. Patrick's ...	10	...	4	...	14
St. Stephen's ...	18	...	1	...	19
<hr/>					
Belle Vue ...	33	..	...	...	33
Botcherby ...	5	1	2	2	10
Stanwix ...	76	5	18	2	101
Upperby ...	47	...	5	...	52
<hr/>					
Totals ...	954	283	238	56	1531

Table showing the total number of school children who suffered from several non-notifiable diseases during 1910, 1911, & 1912.

Year.	Measles.	Chicken Pox.	Whooping Cough.	Mumps.	Total.
1910	104	146	401	185	836
1911	437	165	231	963	1796
1912	954	283	238	56	1531

ANNUAL MORTALITY FROM MEASLES, 1874—1912.

Year.	No. of Deaths.	Year.	No. of Deaths.
1874	...	1894	...
1875	56	1895	5
1876	5	1896	1
1877	12	1897	1
1878	2	1898	59
1879	22	1899	5
1880	4	1900	13
1881	0	1901	5
1882	36	1902	10
1883	11	1903	3
1884	0	1904	7
1885	22	1905	17
1886	4	1906	1
1887	16	1907	54
1888	3	1908	0
1889	44	1909	11
1890	1	1910	3
1891	22	1911	13
1892	3	1912	39
1893	77		

## ENTERIC FEVER.

(Syn. Typhoid Fever.)

3 cases of Enteric Fever were notified, 1 of the cases, although certified as having died from the disease, was found post-mortem to have suffered from generalised Tuberculosis.

**Tabular Statement of the cases notified as Enteric (Typhoid) Fever during the year 1912, with action taken.**

Date.	Locality.	Insanitary conditions present.	Action taken.	Result.
23rd Jan.	* Crummock St.	None	Removed to Isolation Hospital	Died 4 days after admission
18th Nov.	Peter Street	None	Removed to Isolation Hospital	Recovered
6th Dec.	† Milholme Ter.	None	Removed to Isolation Hospital	Recovered

\* Not Enteric Fever.

† Occurred in the added portion of the City.

## ENTERIC (TYPHOID) FEVER SINCE 1874.

## BEFORE ADOPTION OF NOTIFICATION ACT.

Typhoid Cases estimated from the deaths on the basis of the case mortality of Enteric (Typhoid) Fever during the first 18 years of compulsory notification.

1874	...	...	...	...	...	172	98
1875	...	...	...	...	...	180	
1876	...	...	...	...	...	75	
1877	...	...	...	...	...	37	
1878	...	...	...	...	...	82	
1879	...	...	...	...	...	82	
1880	...	...	...	...	...	112	
1881	...	...	...	...	...	52	
1882	...	...	...	...	...	67	
1883	...	...	...	...	...	60	
1884	...	...	...	...	...	52	
1885	...	...	...	...	...	7	
1886	...	...	...	...	...	45	
1887	...	...	...	...	...	127	
1888	...	...	...	...	...	60	
1889	...	...	...	...	...	7	
						Average of 8 years 53.12	Average of 8 years, 98

## ENTERIC (TYPHOID) FEVER—continued.

Cases of Enteric (Typhoid) Fever notified during years of compulsory notification.						Annual No. of Cases.
	1890	1891	1892	1893	1894	21
	...	...	...	...	...	18
	...	...	...	...	...	32
	...	...	...	...	...	20
	...	...	...	...	...	15
	...	...	...	...	...	20
	...	...	...	...	...	13
	...	...	...	...	...	19
	...	...	...	...	...	22
	...	...	...	...	...	19
	...	...	...	...	...	7
	...	...	...	...	...	19
	...	...	...	...	...	16
	...	...	...	...	...	6
	...	...	...	...	...	15
	...	...	...	...	...	7
	...	...	...	...	...	5
	...	...	...	...	...	1
	...	...	...	...	...	2
	...	...	...	...	...	1
	...	...	...	...	...	6
	...	...	...	...	...	3
	...	...	...	...	...	3

## TYPHUS FEVER.

An outbreak of 9 cases of Typhus Fever occurred in October, 2 of which were fatal, viz., a male, aged 45, and a female, aged 52.

The outbreak commenced in a tenement house in Scott Street, Caldewgate, in which 7 of the 9 cases either occurred or were infected.

Another of the cases was that of a District Nurse, who was in attendance upon the first members of the family to be taken ill. The remaining case was that of an adult female relative living in Meo Court, Crown Street, who had been in contact with some of the affected persons at Scott Street.

The order of discovery, the sex, age, &c., of the affected persons being as follows:—

27th October	Mr. J. (father)	Age 45	Died
"	Mrs. W. (his sister)	" 52	"
"	Ellen J. (daughter)	" 9	Recovered
"	Thomas J. (son)	" 18	"
"	Nurse P. (District Nurse)	" 30	"
28th	Mary J. (daughter)	" 3	"
29th	Rebecca C. (relative)	" 32	"
30th	Luke J. (son)	" 20	"
28th	Ethel J. (daughter)	" 13	"

The origin of the outbreak was probably a daughter of Mr. J., who was recovering from what was supposed to be Influenza and Pneumonia, from which the mother, who had recently died, was also said to have suffered.

#### POLIOMYELITIS.

Two cases of acute Poliomyelitis were notified during the year, one of which terminated fatally, in my opinion not from Poliomyelitis but from Tuberculous Meningitis. The notifications were received on the 2nd March and 26th September respectively.

#### ISOLATION HOSPITAL.

Table showing number of cases removed to Hospital:—

Diseases.	No. of cases admitted	No. of cases recovered.	No. of cases died.
Scarlet Fever ... ...	101	99	2
Diphtheria ... ...	33	31	2
Erysipelas ... ...	3	3	..
Enteric (Typhoid) Fever	3	2	1
Typhus Fever ... ...	9	7	2
 Totals ... ...	149	142	7

#### NOTIFICATION FEES.

The total amount paid in fees for notifications during 1912 was £48 16s. 3d.

## DIARRHŒA.

14 deaths from this disease (all of which occurred in the old City) were registered during the year, as against 56 in 1911 and 3 in 1910, calculated upon the population of the old City (46,420) this gives a mortality rate of .30 per 1,000.

The ages at death were as follows:—

Under 1 year	...	...	11
1—2 years	...	...	3
		—	
		14	—

Seasonal relationship to deaths:—

January	...	...	1	July	...	...	0
February	...	...	2	August	...	...	1
March	...	...	0	September	...	...	1
April	...	...	2	October	...	...	2
May	...	...	2	November	...	...	2
June	...	...	1	December	...	...	0
						—	14
						—	

With the approach of hot weather the greatest precautions should be taken to prevent decomposition and contamination of food stuffs, especially by flies and filth, *e.g.*, blown garbage, dried excreta, and like materials, readily carried about by air currents, the pernicious effects of which are fostered by the prevailing favourable atmospheric temperature. Particular care should be taken with milk and other foods which readily decompose in warm weather, which form the principal diet of infants, amongst whom the greater number of deaths from Diarrhœa is found.

A warning was again issued by means of a large poster displayed at the entrance of all the lanes and courts in the poorer parts of the City, pointing out to householders and others the prevalence of the disease in hot weather, and the precautions which should be taken with regard to the care and the food of infants and young children, &c.

See Zymotic Table, page 46, for locality of deaths.

Annual Mortality from Diarrhoea and Enteric (Typhoid) Fever since 1874.

Year.	Autumn Quarter. No. Registered.	Rate per- 1000 of population	DEATHS FROM DIARRHOEA.												Deaths from Enteric (Typhoid) Fever. — No. Registered.
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
1874	35	1.50	2	2	..	1	1	6	20	9	6	..	3	50	23
1875	27	1.30	2	..	4	1	2	4	5	12	10	2	..	44	24
1876	12	1.10	3	1	3	3	1	..	..	5	5	1	6	7	37
1877	10	.84	2	1	2	1	2	2	2	6	2	1	3	4	28
1878	26	1.06	1	2	1	1	3	3	9	8	9	1	1	1	40
1879	..	.34	2	1	1	1	..	2	2	2	..	..	1	..	12
1880	3	1.20	..	..	5	..	..	..	3	7	21	5	1	..	42
1881	..	.50	..	2	..	2	..	2	2	2	3	3	..	2	18
1882	1	.55	..	1	..	..	..	1	5	7	5	1	..	..	20
1883	8	.45	..	2	..	..	..	..	3	3	5	6	1	..	17
1884	14	.61	2	..	..	1	1	1	7	3	4	3	1	..	23
1885	4	.26	1	1	1	..	..	1	2	2	..	..	1	1	1
1886	8	.60	1	2	..	..	..	2	1	1	6	7	1	2	23
1887	7	.36	1	..	1	2	..	2	..	5	2	1	..	..	14
1888	8	.23	1	..	1	1	..	..	..	3	5	1	..	1	13
1889	6	.27	2	1	..	..	..	..	..	5	1	1	..	1	11
1890	16	.54	..	2	..	1	..	..	1	7	8	1	1	1	22
1891	5	.22	1	..	..	..	..	1	1	2	2	2	..	..	9
1892	2	.10	1	..	..	..	..	..	..	..	2	1	..	..	4
1893	9	.49	..	2	2	2	..	..	..	2	7	1	2	..	20
1894	1	.09	..	..	..	..	..	..	..	..	1	1	..	..	4
1895	3	.24	2	1	..	1	..	..	1	..	2	3	..	..	10
1896	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
1897	4	.21	..	..	2	1	..	..	1	..	3	2	..	..	9
1898	16	.57	..	..	2	..	1	1	1	4	11	2	1	1	24
1899	10	.25	..	..	..	..	..	..	..	3	7	1	..	..	11
1900	7	.53	..	..	..	1	..	4	1	3	3	3	..	..	23
1901	11	.43	2	3	..	..	..	1	1	5	5	3	..	..	20
1902	1	.04	..	..	..	..	..	..	1	..	..	..	1	..	2
1903	1	.06	..	..	1	..	..	1	..	..	1	..	..	..	3
1904	7	.33	..	..	..	..	..	1	..	4	3	2	3	3	16
1905	10	.39	3	..	..	1	1	2	..	5	5	2	1	..	19
1906	7	.26	2	..	1	1	..	..	..	2	5	..	2	..	13
1907	..	.05	..	..	..	..	..	1	2	..	..	..	..	..	3
1908	12	.28	..	..	..	1	..	..	2	3	7	..	..	1	14
1909	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1910	2	.05	..	..	..	..	..	..	..	..	2	..	1	..	3
1911	45	1.20	2	1	1	3	..	1	1	30	14	2	1	..	56
1912	2	.30	1	2	..	2	2	1	..	1	1	2	2	..	1

## TUBERCULOUS DISEASES.

Under this heading are included deaths which have occurred from any of the following conditions:— Pulmonary Tuberculosis (Consumption of the Lungs), Tuberculous Meningitis (including Acute Hydrocephalus), Tuberculous Peritonitis, Tabes Mesenterica, Generalised Tuberculosis, Tuberculosis of Bones, Joints, and other Organs, Lupus, and Scrofula.

The total number of deaths registered from Tuberculosis of all forms, all of which occurred in the old City, was 76, equal to 1.63 per 1,000 of the population.

Of this number 65, or 85.5 per cent., of the deaths were from Pulmonary Tuberculosis.

During 1911. 94 deaths were registered from all forms of Tberculosis, of which 75, or 79.7 per cent., were from Pulmonary Tberculosis.

The above figures show that during 1912 there was a decrease of 18 deaths from all forms of Tuberculosis, and a decrease of 10 deaths from Pulmonary Tuberculosis, upon the figures of 1911.

3 deaths from Tuberculosis of all forms occurred in Institutions within the City, and of this number 1 was due to Pulmonary Tuberculosis.

### PULMONARY TUBERCULOSIS.

(Syn. Consumption of Lungs, Phthisis.)

This, the most frequent of Tuberculous Diseases, is an extremely infectious disease, and is transmitted from man to man, and also from animals to man by means of food, of which milk is the commonest example; BUT BY FAR THE GREATER NUMBER OF CASES ARE THOSE WHICH ARE CAUSED BY PERSONAL CONTACT.

Tuberculosis is most common amongst the poor, and may be said to be a disease especially of the lower classes, by whom it is usually spread, largely as a result of ignorance, dirty habits, and some of their characteristic modes of living.

The town dweller more easily falls a victim to the disease than one who lives in the country, and there is a close relationship between the overcrowding of rooms, houses, and workplaces and this disease; the overcrowding of rooms and houses is often due to poverty, but the disease is almost invariably associated with an impure atmosphere.

Many trades predispose the worker to this disease, especially those occupations accompanied by the formation of dust, or where work is carried out in overcrowded, hot, and moist workrooms. Intemperance and other debilitating conditions are also important factors in the predisposition to the disease.

Consumption depends largely upon known and remediable conditions, and improvement in public health and other matters has led to a decline in the death-rate from the disease, but the difficulty experienced is to get the Consumptive of the lower classes to carry out the simple hygienic rules or methods of precaution, the result being that persons in dangerous stages of the disease occupy the same bed as another or several other members of the same household. It is thus that the disease secures its victims, finally resulting in the infection of a whole household. Whereas, the precaution where possible of a separate bedroom, or, in the absence of this, a separate bed for the consumptive, and the carrying out of certain simple commonsense rules, would prevent such a catastrophe.

**Ages at death of cases of Pulmonary Tuberculosis  
during 1911 and 1912.**

Year.	Under 1 Year.	1-2	2-5	5-15	15-25	25-35	35-45	45-55	55-65	65-75	All Ages.
1911	...	..	2	1	19	21	11	12	6	3	75
1912	1	...	2	4	17	11	15	5	7	3	65

The distribution of the deaths during 1912 was as follows :—

St. Mary's Sub-Registration District	...	32
St. Cuthbert's Sub-Registration District	...	33
	—	—
	65	—

Two other diseases of the chest, viz.:—Pneumonia and Bronchitis, were responsible for 116 deaths during 1912.

Disease.	St. Mary's.	St. Cuthbert's.	Stanwix.	Total.
Broncho-Pneumonia	10	8	1	19
Pneumonia (all other forms)	37	20	1	58
Bronchitis	24	14	1	39
Totals	71	42	3	116

Deaths from Tuberculosis and Respiratory  
Disease during the past 12 years.

Year.	Number of Deaths from Phthisis.	Number of Deaths from Tuberculosis other than Phthisis.	Number of Deaths from other Respiratory Diseases
1901	71	25	144
1902	57	42	118
1903	73	23	92
1904	70	36	167
1905	62	32	130
1906	67	30	122
1907	54	15	137
1908	56	34	112
1909	64	28	108
1910	52	30	91
1911	75	19	98
1912	65	11	116

SUMMARY OF NOTIFICATIONS OF PULMONARY  
TUBERCULOSIS RECEIVED DURING 1912.

Public Health (Tuberculosis) Regulations, 1908	28
Public Health (Tuberculosis in Hospitals) Regulations, 1911	...      ...      ... 140
Public Health (Tuberculosis) Regulations, 1911	217
	385

PUBLIC HEALTH (TUBERCULOSIS)  
REGULATIONS, 1908.

Under the above regulations 28 notifications of Pulmonary Tuberculosis were received, of which number 14 were by the Medical Officer of the Poor Law Infirmary, and 14 by Poor Law District Medical Officers.

In one instance the same patient was notified on seven occasions, and in nine other instances the same patient was notified on two occasions during the year.

This multiplicity of notifications is due to the unsatisfactory and easy method by which a patient may take his discharge from a Poor Law Institution, and the facility with which re-admission may be gained shortly after discharge.

*Form A.*

Notifications from Medical Officers of Poor Law Institutions of persons in their Institutions suffering from Phthisis	...	...	...	14
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*Form B.*

Notifications from District Medical Officers of the Carlisle Union, of persons suffering from Phthisis in their districts	...	...	14
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*Form C.*

Notifications from Superintendent Officers of Poor Law Institutions of the death in, or the removal of a Phthisis patient from the Institution to another address	...	...	12
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*Form D.*

Notifications from Relieving Officers of change of address of Phthisis patients in their districts	0
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TUBERCULOSIS (HOSPITALS) REGULATIONS,  
1911.

Under the above Regulations 140 notifications of Pulmonary Tuberculosis were received during 1912.

The age and sex distribution were as follows :—

Age.	Sex.		Total.
	Male.	Female.	
1—5	3	1	4
5—15	26	38	64
15—25	16	15	31
25—35	4	11	15
35—45	6	7	13
45—55	6	4	10
55—65	2	1	3
65 and upwards	—	—	—
Total	63	77	140

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1911.

(General Notification by Practitioners.)

Under the above Regulations 217 notifications of Pulmonary Tuberculosis were received during 1912.

28 related to males who were married,  
28 ,,, females who were married.

The age and sex distribution were as follows :—

Age.	Sex.		Total.
	Male.	Female.	
1— 5	4	5	9
5—15	49	47	96
15—25	14	15	29
25—35	16	22	38
35—45	10	8	18
45—55	5	7	12
55—65	4	4	8
65 and upwards	5	2	7
Totals	107	110	217

As early as possible after the receipt of the notification the residence of a person suffering from Pulmonary Tuberculosis is visited, and if the patient is at home advice is given and an instruction paper left with him, and cases where the individual is too poor to buy one, an enamelled spit cup or a spit bottle is provided by the Health Department. In cases where the patient is in a Sanatorium or Hospital, advice is given to the relations or friends, and an instruction paper is left with them.

Upon receipt of the death returns from the Sub-Registrars, deaths from Pulmonary Tuberculosis are picked out, and the houses, as many as possible, again visited, and the supervision of cleansing carried out; where possible the walls, &c., of the room occupied by the consumptive during his last days are sprayed with a 4% solution of formaldehyde.

**Figures relating to visits in connection with all notifications of Pulmonary Tuberculosis, 1912.**

No. of primary visits on receipt of notification.	No. of revisits.	No. of houses disinfected in which disinfection was undertaken.	No. of spittoons given to consumptives.	No. of pocket spit flasks given to consumptives.
343	621	47	10	24

## CANCER.

The following figures include all registered deaths from causes within the general term Cancer. The number of deaths registered during 1912 was 62, as against 45 in the year 1911.

One case was registered in the added area of the City between 9th November and the end of the year.

Calculating the 61 cases occurring in the old City upon the population of the old City a mortality rate of 1.3 per 1,000 at all ages is obtained.

Table of deaths, 1908 to 1912.

Age.	Numbers.				
	1908	1909	1910	1911	1912
1 to 5 years ... ...	—	—	—	1	—
5 to 15 years ... ...	—	—	—	2	—
15 to 25 years ... ...	—	—	1	2	3
25 to 35 years ... ..	1	2	—	5	2
35 to 45 years ... ...	3	6	7	5	6
45 to 55 years . ...	8	12	11	6	18
55 to 65 years ... ..	12	15	11	11	18
65 to 75 years ... ...	11	17	11	7	10
75 and upwards ... ...	—	6	6	6	5
Totals ... ...	35	58	47	45	62

## INQUESTS.

The City Coroner held 53 inquests during the past year, as compared with 47 during 1911.

Of this number 50 were held upon the bodies of those who had been resident within the City, and 3 upon the bodies of persons who had resided in other districts, but who died within the City.

Seven of the inquests were held upon the bodies of children under five years, one of these being a child under one year.

The finding of the Jury in these seven cases respectively was:—

Cause.			Age.
Asphyxia, accidentally overlaid	...	..	4 weeks
Shock, accidentally burned	...	...	2 years
Accidentally killed by being run over	...	...	4 $\frac{1}{2}$ ,,
Accidental death by drowning	...	..	3 ,,
Pneumonia	...	...	3 ,,
Suffocation due to accidental drowning	...	...	3 $\frac{1}{2}$ ,,
Accidental burning	...	...	4 $\frac{9}{12}$ ,,

## MORTUARY.

During 1912 12 bodies were removed to the Public Mortuary, West Walls, and post-mortem examinations were performed upon 4 of the bodies at the Mortuary.

### UNCERTIFIED DEATHS.

During the year 16 deaths were registered in which no certificate was given by a medical man, and in which no Coroner's Inquest was held.

During 1911 13 such deaths were registered.

**The 16 deaths in question were registered as follows:—**

No.	Sex.	Age.	Cause of Death as Registered.
1	Male	*1 month	Inanition
2	Male	78 years	Heart disease
3	Female	69 years	Heart failure
4	Male	55 years	Heart failure
5	Male	75 years	Heart failure
6	Male	86 years	Cerebral Haemorrhage
7	Male	86 years	Epilepsy
8	Female	58 years	Chronic Brights Disease
9	Female	36 years	Uraemic Poisoning
10	Female	58 years	Heart failure
11	Female	51 years	Aneurism
12	Female	*5 months	Bronchitis
13	Male	77 years	Heart failure
14	Male	85 years	Heart failure
15	Male	80 years	Heart failure
16	Male	46 years	Pneumonia

\* It will be observed that two of these sixteen uncertified deaths were infants under 1 year of age.

## MIDWIVES ACT, 1902.

## SUPERVISION OF MIDWIVES.

During 1912 15 midwives were on the register as practising within the City.

At the end of each quarter of the year (and at all other times when necessary) all the midwives were visited, the necessary inspections of their books, bags, appliances, &c., being made.

Two midwives amongst whose cases Puerperal Fever occurred were suspended. Their clothing, bags, and appliances were cleansed and disinfected, and in one instance the house of the midwife was disinfected.

No case was brought to my notice during the year of any unregistered or uncertified woman carrying on the practice of midwifery.

The immunity of the City to the dangerous practices of such persons I believe to be due to the adoption of the Notification of Births' Act, 1907, and the establishment of a Female Health Visitor.

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## PUBLIC SLAUGHTER-HOUSES.

## MEAT INSPECTION, &amp;c., 1912.

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During the year special post-mortem examination was made upon 91 diseased carcases of meat at the Public Abattoir, as compared with 95 in 1911.

The following table gives particulars of the carcases examined:—

Animal	Total number of animals slaughtered	Number of carcases specially examined for disease	Number of cases in which the whole carcase was pronounced unfit for food	Number of cases in which portions of a carcase were pronounced unfit for food	Number of condemned carcases affected with Tuberculosis
Oxen	... 3294	69	56	13	50
Sheep	... 15499	12	12	0	0
Calves	... 653	6	6	0	1
Pigs	... 3993	4	4	0	2
Goat	... —	0	0	0	0
Totals	... 23439	91	78	13	53

## HOUSING OF THE WORKING CLASSES.

### HOUSING OF THE WORKING CLASSES ACT, 1890.

### HOUSING, TOWN PLANNING, &c., ACT, 1909.

244 dwelling houses of the tenement class were inspected under and for the purposes of the above Acts.

In 84 instances the houses were in a fairly good condition, and no action was considered necessary.

21 houses were made habitable by conversion into self-contained dwelling houses by the owners without action on the part of the Local Authority.

139 dwelling houses were considered on inspection to be in a state so dangerous or injurious to health as to be unfit for human habitation.

During the year 3 of the houses were made habitable by the owners without action on the part of the Local Authority.

In 76 instances representations were made to the Local Authority and 76 Closing Orders made under Section 17 (2) of the Housing, Town Planning, &c., Act, 1909.

Of the houses thus closed 40 were made habitable by conversion into self-contained dwelling houses, 36 Closing Orders are still in operation.

At the end of 1911, of the houses inspected that year there remained 23 in which no action was taken. These were dealt with during 1912 as follows:—

In one instance a dwelling house, comprising 3 ground floor rooms, was converted into a self-contained dwelling house without action on the part of the Local Authority.

In 22 instances representation was made to the Local Authority and 22 Closing Orders made under the Housing, Town Planning, &c., Act, 1909. Of this number 16 were made habitable by conversion into self-contained dwelling houses.

With respect to the 6 houses not made habitable, Demolition Orders were made under the Housing, Town Planning, &c., Act, 1909, which were still in operation at the end of 1912.

With respect to the character of dwelling houses in the City, all classes exist, comprising 1, 2, 3, and 4-roomed tenements, and those of 5 and more rooms. The type of house predominating is the modern through ventilated house, with front and back entrances, but there are houses in the older parts of the City of the back to back type, particularly in the narrow lanes and courts, some of which are approached by means of a passage beneath shop premises abutting upon the street front.

All the houses are composed either of brick or stone, or a combination of the two, and generally speaking may be said to be well built, which is borne testimony to by the fact that in very few instances have the walls been found to be in such a state of dilapidation as to be unfit for alteration or repair.

A number of the single and 2-roomed tenement dwellings are relics of the hand loom weaving period, the lower room in a number of instances being sunk below the level of the adjacent ground.

It is this class of house which furnishes a greater number of the worst dwellings in the City, to which considerable attention has been recently given, but it is not so much a question of the dilapidation of the outer walls as the faulty architecture, and dilapidated interiors which are met with, and the absence of damp proof courses, giving rise to wetness of walls.

With regard to the question of the sufficiency of good sanitary houses for the working classes in the City, I am of opinion that at the present time there is no actual scarcity, although there cannot be said to be too great a choice for those looking for a change of house.

Table showing particulars relating to Insanitary Property  
dealt with since March, 1905, Housing of Working Classes  
Act, 1890.

Number and Situation.	Date represented to Committee.	Date of Notice served under the Housing of the Working Classes Act, 1890.	Result.
2, 4, 5 Bowman's Court Scotch Street	3rd March, 1905	14th March, 1905	Property made habitable
1, 3, 4, 5, 6 Key's Lane, Scotch Street	3rd March, 1905	14th March, 1905	Property made habitable
13, 15, 17, 19 East Tower Street	3rd March, 1905	14th March, 1905	Property demolished
16, 17 Brewery Row, Caldewgate	23rd June, 1905	19th Oct., 1905	Property made habitable
4, 5, 12, 13, 14 Sewell's Lane, Scotch Street	2nd Feb., 1906	14th Feb., 1906	Property made habitable
2, 3, 4, 5 Durham Ox Lane, Rickergate	29th May, 1908	...	Tenants cleared out spontaneously. Entrance to the lane boarded up temporarily, 22nd Nov., 1912. Owners written to with respect to taking the property down
19 Barley Stack Lane...	10th July, 1908	14th Sept., 1908	Property made habitable
18, 20, 22, 24, 26, 28, 30 Drovers' Lane	1st Oct., 1908	13th Oct., 1908	Property demolished
Nine tenements, Scott's Court, Rickergate	13th Nov., 1908	14th Dec., 1908	One house demolished, the remaining tenements made habitable
9 & 11 Rickergate ...	13th Nov., 1908	14th Dec., 1908	No. 11 pulled down, No. 9 no longer in use as a dwelling house, is used as a cycle repairing shop

Table showing particulars relating to Insanitary Property  
dealt with since March, 1905, Housing of Working Classes  
Act, 1890—*continued.*

Number and Situation.	Date represented to Committee.	Date of Notice served under the Housing of the Working Classes Act, 1890.	Result.
2, 3, 4, 5, 6, 9 Waugh's Lane, Botchergate	14th May, 1909	4th Oct., 1909	Property made habitable
1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13 Rayson's Court, Drovers' Lane	14th May, 1909	4th Oct., 1909	Nos. 3, 4, 8 were boarded up, the remainder made habitable
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 Bird-in-hand Lane, Castle Street	1st Oct., 1909	20th Oct., 1909	One house at the bottom of the lane demolished, 2, 4, 5 boarded up, re- mainder made habitable
10, 12, 14, 16, 18, 20, 22 Jane Street, Willow Holme	15th Oct., 1909	29th Oct., 1909	Converted into self-con- tained through houses, with front and back entrances
2, 4, 6 Jane Street, and 5, 7, 9 Willow Holme	15th Oct., 1909	29th Oct., 1909	Converted into self-con- tained through houses, with front and back entrances
26 Backhouses Walk ...	23rd July, 1909	4th Oct., 1909	One dark and unventilated back bedroom in each of the two houses cut off by walling up the doorway

## Housing, Town Planning, &amp;c., Act, 1909.

Number and Situation.	Date represented to Committee.	Date of Closing Order served under Housing, Town Planning, &c., Act, 1909.	Date of Demolition Order served under Housing, Town Planning, &c., Act, 1909.	Results.
3, 4, 8 Rayson's Court, Drovers' Lane	18th March, 1910	13th April, 1910	21st Oct., 1910	See previous table
2, 4, 5 Bird-in-Hand Lane, Castle Street	18th March, 1910	13th April, 1910	21st Oct., 1910	See previous table
13 to 47 and 42 to 52 Duke Street, and 1 to 41 Back Duke Street	22nd July, 1910	13th Sept., 1910	13th June, 1911	Closing and Demolition Orders made. Owner is to re-build on part of the site, the Corporation having agreed to pay £500 for a certain portion of the land for street improvements.
19, 21, 23 Ricker-gate	3rd March, 1911	9th May, 1911	12th April, 1912	Closing and Demolition Orders made. Owner appealed to Local Government Board. Enquiry held by W. R. Collin, Esq. Closing Order confirmed by Local Government Board. Doors and windows walled up and roof taken off by City Surveyor
31, 33, 35, 37, 39, 41, and 43 Queen Street	8th Dec., 1911	9th Jan., 1912	11th Oct., 1912	Nos. 31, 33, 35 Demolition Orders still in operation. 37, 39, 41, 43 converted into through houses

Housing, Town Planning, &c., Act, 1909—*continued.*

Number and Situation.	Date represented to Committee.	Date of Closing Order served under Housing, Town Planning, &c., Aet, 1909.	Date of Demolition Order served under Housing, Town Planning, &c., Aet, 1909.	Results.
1, 2, 3, 4, 5, 6, 7 Lonsdale's Lane	5th Jan., 1912	15th Feb., 1912	..	Converted into self-contained through houses with front and back entrances
54, 56, 58, 60, 62 Queen St., and 9 Broad- guards	1st March, 1912	12th April, 1912	...	Closing Orders still in operation. Owner has property in hand
10 and 12 Queen Street; 1, 3, 5, 7, 9, 23, 25, 27, 29, 67, 69, 71, 73, 75, 77, 79, 81 Rigg Street, and 3 houses MacDonald's Court	7th June, 1912	11th July, 1912	...	Closing Orders still in operation. Owner has property in hand
20–38 White Row, 40–52 Cross Row, and 2 houses, Fire Station Lane, Junction Street	4th Oct., 1912	6th Nov., 1912	...	Closing Orders still in operation
2 and 4 Finkle Street, 3–15 Twentyman's Court; 8, 10, 12 Drovers' Lane; 17 & 18 Slacks Court, Drovers' Lane	18th Oct., 1912	11th Dec., 1912	...	Closing Orders still in operation

Table showing number of dwelling houses  
erected in the City from 1891 to 1912  
inclusive.

Year.	No. of Houses erected.	Year.	No. of Houses erected.
1891	... 149	1902	... 178
1892	... 81	1903	... 170
1893	... 148	1904	... 269
1894	... 184	1905	... 181
1895	... 176	1906	... 183
1896	... 198	1907	... 42
1897	... 217	1908	... 27
1898	... 208	1909	... 7
1899	... 226	1910	... 23
1900	... 262	1911	... 11
1901	... 181	1912	... 11 .

DAIRIES, COWSHEDS, AND MILKSHOPS.

I have visited most of the cow byres within the City during the past year, which, on the whole, are in a fairly satisfactory condition.

In some instances the byres are situated in a field, and the surrounding ground being unpaved is wet and easily polluted, and owing to the absence of proper drainage the polluted surface water has difficulty in getting away. The surroundings of the byre are thereby made unpleasant, at the same time incurring the chances of milk contamination.

The milk supply of the City now consists chiefly of that from the byres within the City, and from the surrounding rural district to a smaller extent.

There are 55 byres, accommodating about 412 milk cows in the extended City, being an increase of 32 byres and 270 cattle since extension.

The cattle are under the constant supervision of the City Veterinary Surgeon, and the dairy buildings and places from which milk is sold are regularly inspected by the staff of the Health Department.

During the year 18 samples of milk were purchased for bacteriological observation from carts of persons vending milk within the City whose dairies were outside. The samples were sent to Professor Delepine, of Manchester, for the purpose of inoculation tests, in order to demonstrate the presence or absence of tubercle bacilli. Reports upon two samples were to the effect that they produced tuberculosis in the animals experimented upon.

Under the powers of the Carlisle Corporation Act, 1904, Section 7, I visited 2 farms together with the City Veterinary Inspector. At the first 54 dairy cattle were kept, of which number 10 upon examination exhibited diseased conditions either of the udder or lungs. It was suggested to the owner that the tuberculin test should be applied, to which he consented, positive re-action being obtained in each instance. 5 of the cattle were slaughtered at a knacker's yard, and the remaining 5 removed from the byre to a special shed, and their milk prohibited for use as human food.

On visiting the second farm, where 8 dairy cattle were kept, one very emaciated cow exhibited signs of generalised Tuberculosis, the udder being in an advanced state of disease. A second cow was found to have an enlarged quarter of the udder. The former cow was slaughtered at a knacker's yard, and the latter subjected to the Tuberculin test, but no re-action was obtained. During the time that the matter relating to these cases was in hand I was in communication with the Medical

Officer of Health for the Rural District, who accompanied me when I paid my first visit to the first-mentioned farm and associated himself with me in the whole of the procedure, and at subsequent meetings the matters relating to the two farms were dealt with by the Committee of the Rural District Council.

#### VETERINARY INSPECTOR'S REPORT.

During the year 137 newly-purchased and newly-calved cows have been examined by me; of this number 134 were found to be free from disease, the remaining 3 cows had nodular enlargement of the udder and were returned to the sellers. Searching enquiries were made to ascertain the destination of these cows, and it was found that they had all been taken out of the district; consequently they were no longer a danger to the health of the City.

3,516 examinations of milk cattle, in order to ascertain the presence of disease likely to effect the milk supply, were made, and in addition to the 3 cases mentioned above, the following conditions likely to affect the milk secretion of the regular occupants of the byres were discovered :—

Gastric Derangement	...	...	7
Septicæmia	...	...	5
Congestion of Lungs	...	...	3
Milk Fever	...	...	3
Inflammation of Udder	...	...	2
		—	20
		—	—

The milk of these 20 cows was destroyed until the animals were convalescent.

Since 9th November I have visited the cowsheds and examined the cows in the area added to the City, viz.:— 32 cowsheds housing 240 cattle.

Amongst the cattle housed therein 8 cows presented symptoms of disease of the udder and lungs. I advised the owners to have the tuberculin test applied, and to this course they readily consented. As a result of the test 1 animal only was found to be free from Tuberculosis. 6 animals exhibited a characteristic re-action, and 1 case was doubtful. The 6 re-acting animals were removed out of the district.

During the year I made the following examinations upon carcases at the Public Slaughter-houses:—8 carcases of beef and 1 of pork, with one exception I certified all the carcases to be unfit for human food.

I have watched the Auction Marts regularly each Monday, and have there examined 12,257 pigs.

During my inspections at the Auction Marts 1 milk cow was found to be suffering from chronic disease of the udder, whilst the milk secretion of 2 other milk cows contained a large quantity of blood. The milk in each instance was put down the sewer in my presence.

2 head of cattle exposed for sale in the Fat Stock Market were found in an emaciated and extensively diseased condition. Both animals were seized and slaughtered at the Public Slaughter-houses, where they were found to be affected with advanced Tuberculosis of old standing.

In the course of my inspections in the Auction Marts I found 2 cows overstocked with milk, and the teats sealed with collodion to prevent the animals relieving themselves.

I reported the case to the Town Clerk, and on his instructions informed the Inspector for the N.S.P.C.A. The Society prosecuted the owner for cruelty, and a fine of £10 and costs was imposed.

On account of the serious outbreak of Foot and Mouth Disease in the neighbourhood of the City and regulations imposed for the suppression of the disease, it was necessary for me to devote my whole time to inspecting the cattle, sheep, and pigs within the City boundary.

The examinations were carried out every second and third day until the Regulations were relaxed.

In addition to the above I examined, under instructions from the Board of Agriculture, the mouths, tongues, and feet of all animals slaughtered in the Public Slaughter-houses and the Railway Slaughter-houses.

I visited the various Railway Companies' Depôts and gave instructions for, and supervised the cleansing and disinfection of the lairs and all the cattle trucks in the sidings. The Companies willingly carried out the work to my satisfaction.

Between the re-opening of the Auction Marts and the removal of the last of the Foot and Mouth Regulations I examined all fat and store stock exposed for sale, making in all 85,199 examinations.

The horses belonging to the Corporation Stud, 20 in number, which includes 2 horses used by the Fire Brigade, have, with one exception, been free from serious illness, and have been in constant work. The exception was a case of Lockjaw (*Fetanus*), resulting in the death of the animal.

#### COVERED MARKETS.

In my Annual Reports for 1908, 1909, 1910, and 1911 I spoke of the nuisance from the presence of dogs in the Covered Markets, and the danger to the health of the public from the contamination of food exposed for sale.

The Markets' Committee have been anxious to put an end to the nuisance, and have had notices posted up at several points inside the Market, warning the public against bringing dogs into the building. Some slight beneficial effect followed this procedure, but there are still to be seen every day, chiefly belonging to occupiers of shops and stalls, dogs which spend their whole day time in the Markets, a fact of which those in charge of this important public place are fully aware.

#### SEWAGE WORKS.

During the past year I have paid several visits—all of them surprise visits—to the Sewage Works, and am satisfied that the work is carried out by those employed there in a careful manner.

The several stages through which the sewage passes during the various processes of treatment are closely supervised, and the resulting effluent is satisfactory. The lagooned material does not appear to cause any discomfort to those working upon it, and whatever effluvium arises during carting is only appreciable at a slight distance; it is, however, essential that care should be exercised by those removing this material so as to avoid possible complaints due to leakage from the carts when passing through the streets.

#### AMBULANCE.

A Horse Ambulance provided by the Corporation is under the superintendence of the Head Constable, and is housed at the Chief Fire Station, Spring Gardens Lane. It is in keeping with modern requirements and is available for use by the general public in case of accident and injury by fire, &c., or its use may be obtained for the removal of any sick or convalescent person other than in infectious diseases (for which a special ambulance is provided).

During the year its use was requisitioned on 73 occasions.

## CARLISLE PUBLIC BATHS.

## NUMBER OF BATHERS DURING 1912.

The total number of bathers was 58,647, as compared with 60,190 in 1911, and 57,680 in 1910.

SWIMMING BATHS.		1st Class.	2nd Class.	Total.
Adults (both sexes) ...	3,147	12,584	15,731	
Elementary School Children (Free) ..	...	12,353	12,353	
Boys' Brigade, &c. (swimmers charged 1d. each) ...	...	7,271	7,271	
Club and Contract Bathers (1st and 2nd Class) ...	...	...	8,578	
<hr/>				
PRIVATE BATHS.				.
Adults (both sexes) ...	3,882	8,685	12,567	
Vapour ...	...	...	129	
Salt ...	...	...	8	
<hr/>				
TURKISH BATHS.				
Males ...	454	1,322	1,776	
Females ...	18	216	234	
<hr/>				
Totals ...	...	...	...	58,647

## WATER SUPPLY.

During the year samples of water were regularly taken from a domestic tap and submitted to chemical and bacteriological examination, the quality of the water being uniformly good.

The chemical and bacteriological results of certain samples are given in the following pages, together with the results of a special examination as to the action of the water upon lead.

Total monthly distribution of Water from Cumwhinton covered reservoir during 1912:-

Month.	Number of Gallons.	No. of Gallons per head, per day.
January ...	50,990,000	29·37
February ...	55,040,000	33·89
March ...	49,730,000	28·64
April ...	52,025,000	30·97
May ...	55,465,000	31·95
June ...	54,770,000	32·60
July ...	60,330,000	34·75
August ...	54,260,000	31·25
September	51,850,000	30·86
October ...	53,030,000	30·55
November ...	51,040,000	30·38
December ...	56,550,000	32·57

Total output of Water from Cumwhinton covered reservoir during the years 1910, 1911, 1912:-

Year.	Number of Gallons.	No. of Gallons per head, per day.
1910	631,453,000	30·87
1911	645,490,000	31·48
1912	645,080,000	31·47

## REPORT ON WATER, CHEMICAL AND BACTERIOLOGICAL.

## CHEMICAL ANALYSIS BY DR. HELTON, WHITEHAVEN.

## REPORTS ON SAMPLES OF WATER FROM DOMESTIC TAP.

Results shown in grains per gallon.

1912.

CHEMICAL.	APRIL.	JULY.	OCT.	DEC.
Total Solid Matter in solution dried at 212° F ...	6·440	8·680	7·280	7·840
Chlorine existing as Chlorides	·630	·560	·490	·560
Ammonia ...	traces	traces	None	·001
Albuminoid Ammonia ...	·004	·004	·003	·003
Nitrogen existing as Nitrates...	traces	traces	traces	traces
Oxygen absorbed in 15 minutes at 80° F ...	·069	·080	·030	·041
Oxygen absorbed in 4 hours at 80° F ...	·154	·129	·055	·066
Lead and other Poisonous Metals	None	None	None	None
Hardness before boiling	5½°	7°	6¼°	7°
Hardness after boiling	½°	1¼°	1°	1½°
Appearance in two-foot tube...	Clear greenish-yellow	Clear yellowish-green	Clear yellowish-green	Clear yellowish-green
Smell when heated to 100° F...	None	None	None	None
Microscopical Examination ...	Slight deposit of Vegetable debris	Vegetable debris	Vegetable debris and a few mineral particles	Slight deposit of vegetable debris

A determination of the plumbago-solvent action of the water was made according to the method of the Local Government Board in all samples taken during the year, with the following results :—

Lead dissolved at 13° C.—

	1st	2nd	3rd	4th	5th	Average.
APRIL	{ 50 c.c. ·04					

Lead dissolved at 16° C.—

	1st	2nd	3rd	4th	5th	Average.
JULY	{ 50 c.c. ·03	{ 50 c.c. ·06	{ 50 c.c. ·06	{ 50 c.c. ·03	{ 50 c.c. ·06	{ 50 c.c. ·05

Lead dissolved at 13° C.—

	1st	2nd	3rd	4th	5th	Average.
OCT.	{ 50 c.c. ·02	{ 50 c.c. ·03				

Lead dissolved at 10° C.—

	1st	2nd	3rd	4th	5th	Average.
DEC.	{ 50 c.c. ·02	{ 50 c.c. ·01	{ 50 c.c. ·02	{ 50 c.c. ·01	{ 50 c.c. ·01	{ 50 c.c. ·01

### BACTERIOLOGICAL EXAMINATION BY PROF. DELÉPINE, MANCHESTER.

QUANTITATIVE ANALYSIS.		1912.			
A Aerobic micro-organisms growing for 3 days in nutrient gelatine at 20° C to 21° C.		Number of colonies in one gramme of water.			No. of kinds clearly recognisable.
		APRIL.	JULY.	OCT.	DEC.
Non-Liquefying Bacteria ...	10 } 20	1 }	3 }	5 }	2 }
Liquefying Bacteria ..	10 }	1 }	2 }	2 }	2 }
Other Micro-Organisms ...	...	1 }	...	...	...
B Anærobic Micro-Organisms ...	...	...	...	...	...
QUALITATIVE ANALYSIS.		1912.			
		APRIL.	JULY.	OCT.	DEC.
A Bacteria associated with sewage or faecal pollution ...	B. Coli communis not found in 100 C. C.	B. Coli communis not found in 100 C. C.	B. Coli communis not found in 100 C. C.	B. Coli communis not found in 100 C. C.	B. Coli communis not found in 100 C. C.
B Bacteria associated with disease	Not found	Not found	Not found	Not found	Not found

## METEOROLOGICAL STATISTICS, 1912.

OBSERVATIONS TAKEN AT THE CEMETERY BY  
J. T. CHARLTON, ESQ.

The mean temperature for the year was nearly two degrees lower than the mean for 1911, but it was almost the same as in 1910, the figures being 55.4 degrees for 1912, 57 degrees for 1911, and 55.1 degrees for 1910, these figures representing the mean between the shaded and exposed thermometers. The highest readings for the year were 131 degrees on June 1st and 130 degrees on June 13th, as compared with the record of 131 degrees in the sun on July 12th, 1911. The highest shade reading was 85 degrees on July 16th, as compared with 88 on July 12th in the previous year. The lowest reading was zero on November 30th, as compared with a minimum of 12 degrees on February 2nd in the previous year. The hottest month was July with an average of 82.4 degrees by the exposed and 61.4 degrees by the shaded thermometers. In 1911 the hottest months were July and August with 83.5 and 81.5 degrees by exposed and 63.5 and 62.5 degrees by shaded thermometers. The following are details of each month's temperatures:—

		Solar radiation maximum.	Terrestrial minimum.	Mean of exposed thermometers.
January	...	80° on 3rd	11° on 29th	39.1°
February	...	99° on 21st	5° on 4th	40.5°
March	...	110° on 19th	23° on 16th	60.5°
April	...	120° on 22nd	17° on 18th	67.4°
May	...	122° on 25th	25° on 24th	69.4°
June	...	131° on 1st	37° on 17th	77.1°
July	...	130° on 13th	32° on 19th	82.4°
August	...	118° on 8th	30° on 3rd	74.4°
September	...	115° on 2nd	28° on 9th	60.8°
October	...	108° on 27th	22° on 4th	63.8°
November	...	86° on 8th	zero on 30th	52.7°
December	...	79° on 31st	4° on 1st	47.8°

		Shade maximum.	Shade minimum.	Mean.
January	...	56° on 1st	11° on 29th	39.1°
February	...	58° on 16th	7° on 4th	46.8°
March	...	59° on 26th	27° on 16th	46.5°
April	...	74° on 22nd	21° on 12th	46.5°
May	...	70° on 30th	30° on 24th	51.1°
June	...	73° on 7th	40° on 17th	57.2°
July	...	85° on 16th	42° on 19th	61.4°
August	...	61° on 16th	35° on 3rd	54.8°
September	...	66° on 23rd	31° on 9th	49.9°
October	...	65° on 10th	25° on 4th	46.8°
November	...	64° on 27th	5° on 30th	42.7°
December	...	58° on 4th	7° on 1st	43.0°

					Mean at dew point.		Monthly range.
January	...	...	...	...	37.3	...	27°
February	...	...	...	...	35.6	...	51°
March	...	...	...	...	42.8	...	32°
April	...	...	...	...	43.1	...	53°
May	...	...	...	...	46.6	...	40°
June	...	...	...	...	51.5	...	33°
July	...	...	...	...	57.8	...	43°
August	...	...	...	...	50.7	...	26°
September	...	...	...	...	46.8	...	35°
October	...	...	...	...	39.8	...	40°
November	...	...	...	...	39.7	...	59°
December	...	...	...	...	38.9	...	51°

The highest reading of the barometer during the year was 30.404 inches on April 23rd and October 4th, as compared with 30.610 inches on February 1st, 1911, and 30.514 on October 14th, 1910. The lowest reading was 28.780, on March 19th, as compared with 28.752 on November 18th, 1911, and 28.356 on November 7th, 1910. The monthly variations of the thermometer are shown in the following table:—

		Highest.		Lowest.		Mean.	Month'y. range.
January	...	30.260 on 2nd	...	29.050 on 6th	...	29.748	... 1.210
February	...	29.970 on 6th	...	28.810 on 9th	...	29.274	... 1.160
March	...	30.040 on 12th	...	28.700 on 19th	...	29.430	... 1.260
April	...	30.404 on 23rd	...	29.340 on 9th	...	29.378	... 1.064
May	...	30.220 on 25th	...	29.468 on 15th	...	29.820	... 0.752
June	...	29.836 on 27th	...	29.252 on 4th	...	29.619	... 0.584
July	...	30.208 on 5th	...	29.208 on 28th	...	29.828	... 1.000
August	...	29.932 on 31st	...	29.174 on 29th	...	29.548	... 0.758
September	...	30.376 on 21st	...	29.270 on 30th	...	30.030	... 1.106
October	...	30.404 on 4th	...	29.074 on 30th	...	29.768	... 1.330
November	...	30.182 on 3rd	...	28.872 on 26th	...	29.900	... 1.310
December	...	30.060 on 3rd	...	29.150 on 26th	...	29.538	... 0.910

Highest reading for the year 30.404, April 23rd and October 4th.

Lowest reading for the year 28.780 on March 19th.

February, April, and March had the lowest average of barometrical pressure, but the heaviest rainfall was not recorded in those months. As in 1910 August had the unenviable record as the wettest month. The rainfall was 4.47, and 24 out of the 31 days were more or less wet. June was a good—or bad—second with 4.13 inches falling on 24 days out of the 30. In 1911 the wettest month was December with 4.73 inches. The total rainfall, amounting to 30.01 inches falling on 217 days, was actually less than in the hot preceding year with its average of 30.20 inches, but, on the

other hand, the number of days on which rain fell was 36 in excess of 1911. That is the aspect of the rainfall which has made the past year so depressing. In 1910 the rainfall was 29.64 inches on 197 days. Details of the rainfall are as follows, the mean monthly rainfall being 2.5 inches falling on 18 days:—

	1912.					1911.				
				Rainy					Rainy	
	Inches.	days.				Inches.	days.			
January	...	...	...	1.45	in 16	...	1.04	in 13		
February	...	...	...	1.39	in 19	...	3.62	in 16		
March	...	...	...	3.81	in 26	...	1.33	in 15		
April	...	...	...	0.42	in 8	...	2.75	in 18		
May	...	...	...	1.81	in 17	...	2.32	in 12		
June	...	...	...	4.13	in 24	...	3.79	in 13		
July	...	...	...	1.83	in 14	...	0.69	in 7		
August	...	...	...	4.47	in 24	...	2.20	in 11		
September	...	...	...	2.22	in 10	...	2.16	in 11		
October	...	...	...	2.1	in 18	...	2.23	in 14		
November	...	...	...	2.65	in 18	...	3.34	in 22		
December	...	...	...	3.73	in 23	...	4.73	in 29		

The prevailing winds during the past year were from the south-west, with 99 days as compared with 100 days in the previous year. West winds were again second, and north-east winds third, the days on which the wind was in the north-east being six fewer than in 1911. The following are details of the wind, cloud, and ozone during the year:—

#### WIND.

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm	Dys.
January	...	3	3	2	5	3	2	2	2	9
February	...	0	2	1	8	2	4	3	0	9
March	...	0	1	0	5	2	16	4	1	2
April	...	3	7	2	2	1	7	1	2	5
May	...	0	7	1	1	2	10	3	2	5
June	...	1	2	4	1	5	9	3	1	4
July	...	1	8	1	2	1	6	2	0	10
August	...	0	5	3	4	1	5	9	3	1
September	...	1	2	3	4	0	3	3	6	8
October	...	0	3	0	6	3	12	4	1	2
November	...	3	0	0	0	2	9	8	4	4
December	...	0	0	1	4	3	16	4	0	3
	12	40	18	42	25	99	46	22	62	366

		Wind.		Cloud.		Ozone.	
		Mean force. Maximum 12.		Mean amount. Maximum 10.		Mean degree. Maximum 10.	
January	...	...	1.8°	...	8.0°	...	2.8°
February	...	...	1.8°	...	6.6°	...	2.6°
March	...	...	2.5°	...	7.1°	...	5.0°
April	...	...	2.3°	...	5.2°	...	3.4°
May	...	...	1.6°	...	7.7°	...	3.3°
June	...	...	1.6°	...	7.3°	...	3.6°
July	...	...	1.8°	...	6.0°	...	2.8°
August	...	...	2.3°	...	6.9°	...	3.0°
September	...	...	1.8°	...	4.5°	...	3.2°
October	...	...	2.5°	...	4.0°	...	2.5°
November	...	...	2.5°	...	7.1°	...	4.0°
December	...	...	3.5°	...	6.5°	...	4.9°
Monthly mean	...	...	2.2°	...	6.4°	...	3.4°

## DENTON HOLME.

The rainfall in the Denton Holme allotments, taken weekly with a gauge of five inches, two feet above ground and 57 feet above sea level, indicates a total for the year of 29.071 inches, giving a weekly average of about 0.559 inches. There have been five weeks without rainfall during the year, viz., two in April, one in July, and two in September. The driest month was April; the wettest month August.

## RAINFALL.

MONTHS.	1912.										Average for 10 years 1902-1911.	
	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Rainfall, days on which Rain fell.	
January	2.40	4.34	2.18	1.42	4.02	1.16	2.92	1.69	2.73	1.04	in.	in.
February	1.04	5.00	2.24	1.38	1.70	1.74	2.68	1.50	4.04	3.62	1.45	2.39
March	2.36	3.76	2.54	2.56	2.00	2.65	3.68	3.14	1.25	1.33	1.39	2.49
April	1.58	2.06	2.36	2.90	.94	2.06	2.08	2.52	1.69	2.75	3.81	2.52
May	2.48	2.76	2.62	1.56	3.80	3.30	3.28	.81	2.07	2.32	.42	2.09
June	1.66	1.60	1.86	1.26	1.46	1.64	1.70	2.95	1.53	3.79	1.81	2.50
July	2.46	4.80	1.84	2.54	2.04	2.38	3.50	4.44	3.76	.69	4.13	2.24
August	2.50	4.90	3.54	3.06	4.72	3.32	3.18	3.68	4.28	3.76	1.83	2.84
September	1.62	3.76	1.14	2.20	1.30	6.70	3.88	2.50	.38	2.16	2.22	3.53
October	2.94	9.54	1.54	2.22	4.40	6.22	1.98	5.22	1.68	2.23	2.10	2.56
November	1.28	2.58	2.60	2.54	3.02	2.68	2.56	.86	3.61	3.34	2.65	3.79
December	3.20	2.14	2.26	1.34	2.48	5.64	1.86	3.82	2.62	4.73	3.73	2.50
Totals	25.52	47.24	26.72	24.98	31.88	36.49	33.30	33.13	29.64	30.20	30.01	217
Total number of days on which Rain fell	216	236	198	182	194	211	201	162	197	181	...	32.45

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**ANNUAL REPORT**

OF

**CHIEF SANITARY INSPECTOR.**

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CHIEF SANITARY INSPECTOR'S ANNUAL  
REPORT.

**To the Chairman & Members of the Health Committee of the Carlisle City Council.**

Gentlemen,

I have the honour of presenting to you my Annual Report dealing with the work of the Sanitary Inspectors for the year 1912.

INSPECTION OF THE CITY AND REMOVAL OF NUISANCES.

The systematic inspection of the lanes, courts, and yards within the City has been carried out as in former years, and where nuisances discovered were owing to structural defects, the usual notices were served, but in most cases where the nuisances could be readily abated by the occupier of the premises whereon it existed, verbal intimation was given.

Police Court proceedings were instituted in one instance in order to procure the abatement of a nuisance. The Court made an order for the immediate execution of the work and cost of the proceedings.

Table showing the number and nature of the nuisances dealt with during the year:—

*Public Health Acts—*

Choked and filthy water-closets ... ...	52
Defective and dilapidated water-closets ... ...	148
Defective water-closet cisterns ... ...	7
Absence of water to sanitary conveniences...	27
Choked and defective drains ... ...	51
Offensive and defective gullies ... ...	27
Insufficient gully accommodation ... ...	2

Wastes of water	...	...	...	...	139
Defective and absence of sink	...	...	...	...	2
Choked and defective waste pipes	...	...	...	...	10
Choked and defective eaves, gutters, and downspouts	...	...	...	...	252
Defective and insufficient flagging and paving of yards and lanes	...	...	...	...	142
Defective roofs to premises	...	...	...	...	16
Defective walls, floors, ceilings, &c.	...	...	...	...	32
Dirty passages and staircases	...	...	...	...	116
Accumulations of refuse and manure	...	...	...	...	29
Accumulation of fish boxes	...	...	...	...	1
Dirty houses and bedding	...	...	...	...	9
Dirty yards, courts, &c.	...	...	...	...	7
Overcrowding of houses	...	...	...	...	6
Improper keeping of animals and fowls	...	...	...	...	17
Eseape of coal gas	...	...	...	...	1
Insanitary manure pit	...	...	...	...	1
Defective ventilation pipes	...	...	...	...	2
Absence of light and ventilation	...	...	...	...	4
Miscellaneous	...	...	...	...	4
					—
					1,104

*Factory and Workshop Acts—*

Dirty workrooms	...	...	...	...	11
Dirty bakelhouses	...	...	...	...	9
Defective floors	...	...	...	...	1
Defective ceilings and roofs	...	...	...	...	2
Absence of and insufficient ventilation	...	...	...	...	2
Defective drain	...	...	...	...	1
Sanitary accommodation—unsuitable or defective	...	...	...	...	2
					—
					28
Total	...	...	...	...	1,104
					—
					1,132

## HOUSE TO HOUSE INSPECTION.

Table showing the particulars of House to House Inspection for the year 1912.

The Table does not include inspections made under the Housing, Town Planning, &c., Act, 1909, which are set out on pages 77-80

Name of Street or Court	Number of houses inspected	Defective water-closets	Choked and defective drains, gullies, and waste pipes	Dilapidated paving and flagging	Defective roofs and spouting of houses	Insufficient drainage and w.c. accommodation	Defective walls, floors, staircase, & ceilings of houses	Insufficient light & ventilation	Overcrowding of houses	Animals and fowls improperly kept	Miscellaneous
Currock Road	92	8	5	13	7	1	...	1	...	2	1
South Western Terrace	21	...	1	...	...	...	...	...	...	...	1
Red Bank Terrace	24	5	...	11	4	...	...	...	...	...	...
Red Bank Square	2	...	...	1	...	...	...	...	...	...	...
Adelphi Terrace	23	2	2	1	3	...	...	...	...	...	...
Coney Street	12	...	...	...	1	...	...	...	...	...	...
Alton Street	15	2	...	6	2	...	1	...	...	2	...
Somerset Place	5	...	...	...	...	...	...	...	...	...	...
Hampton Row	5	...	1	...	...	...	...	...	...	...	...
Blackwell Road	78	14	1	8	5	...	...	2	...	1	1
Boundary Terrace	38	12	7	10	20	2	4	...	...	...	...
South Dale Street	1	...	...	...	...	1	...	...	...	...	...
Millholme Terrace	36	4	...	13	7	...	...	...	...	...	...
Gloucester Road	61	5	3	9	1	...	...	1	...	...	...
Clementina Terrace	41	4	...	16	2	...	1	...	...	...	...
Harold Street	26	2	...	1	21	...	...	...	...	3	...
Harrison Street	82	14	2	...	3	...	1	...	...	1	1
Tithebarn Street	19	3	...	1	3	...	...	...	...	...	...
Salisbury Road	2	1	...	...	...	...	...	...	...	...	...
Montreal Street	59	4	1	...	2	...	...	...	...	...	...
Maitland Street	5	1	...	...	...	...	...	...	...	...	...
Mayson Street	29	3	...	...	1	...	...	...	...	...	...
Totals ...	676	84	23	89	82	3	10	1	1	9	5

## COMPLAINTS.

138 complaints have been received. Each complaint was investigated, and the following list shows the nature of nuisances found.

Choked and defective drains and gullies	...	28
Choked, dirty, and defective water-closets	...	20
Accumulations of refuse, &c.	...	12
Dirty houses	...	10
Absence of water to sanitary conveniences	...	9
Defective spouting	...	5
Overcrowding of houses	...	4
Animals and fowls improperly kept	...	3
Defective walls, floors, and ceilings	...	2
Dampness in houses	...	2
Offensive smell	...	2
Smoke nuisances	...	1
Absence of light and ventilation	...	1
Defective flagging and paving	...	1
Defective waste pipes	...	1
Flooding of cellar	...	1
Waste of water	...	1
Polluted hot water system	...	1
Miscellaneous	...	3
 Total	...	107

## DRAIN TESTING.

During the year the smoke or water tests were applied to drains of 70 houses.

## FACTORY AND WORKSHOP ACTS.

The whole of the workshops upon the register have been inspected, and where infringements of the provisions of the Factory and Workshop Acts were discovered steps were taken to have them remedied.

The total number of workshops upon the register, excluding bakehouses, is 239, as compared with 249 last year.

10 workshops were found to be without the Factory Abstract affixed, as prescribed by Section 128 of the Act. In each instance the Factory Inspector was notified, in accordance with the provisions of Section 133 of the Act

7 complaints were received from H.M. Inspector of Factories relating to sanitary defects in Factories and Workshops, viz.:—

Unsuitable sanitary conveniences	...	...	3
Deficient ventilation	...	...	2
Defective drains	...	...	1
Dirty workshop	...	...	1
			—
			7
			—

All the complaints were investigated, and the defect remedied.

#### OUTWORKERS.

During the year lists relating to 5 outworkers were sent in, as required by the home work provisions of the Factory and Workshop Act, 1901.

All the outworkers' premises were visited and found to be in a satisfactory condition.

#### FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

##### 1.—Inspection of Factories, Workshops, and Workplaces.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES .. ... ... (Including Factory Laundries)	45	3	...
WORKSHOPS .. ... ... (Including Workshop Laundries)	649	24	...
WORKPLACES ... ... ... (Other than Outworkers' premises included in Part 3 of this Report)	..	...	...
TOTAL ... .. ..	694	27	...

## 2.—Defects found in Factories, Workshops, and Workplaces.

Particulars.	Number of Defects.			Number of Pro- secutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness ...	20	20	...	...
Want of ventilation ...	2	2	..	...
Overcrowding... ...	...	..	...	..
Want of drainage of floors ...	..	...	...	...
Other nuisances .. ...	3	3	...	...
<i>Sanitary accommodation:—</i>				
{ 1. Insufficient ...	...	...	...	...
{ 2. Unsuitable or defective	2	2	...	...
{ 3. Not separate for sexes	...	..	...	...
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of under-ground bakehouse (s. 101) ..	...	...	...	...
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ... ...	1	1	...	...
Other offences ... ... (Excluding offences relating to outwork which are included in Part 3 of this report)	...	...	...	...
Total .. ...	28	28	...	...

### 3.—Home Work.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.					
	Lists received from Employers.					
	Sending twice in the year.			Sending once in the year.		
	Lists.	Outworkers.	Contractors.	Lists.	Outworkers.	Contractors.
			Workmen.			Workmen.
Wearing apparel—						
(1) Making, &c....	4	...	8	1	...	1
(2) Cleaning and Washing	...	...	...	...	...	..
Total	...	4	...	8	1	...
						1

### 4.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year	Number.
Important classes of workshops, such as workshop bakehouses, may be enumerated here. {	
Workshops .. ...	217
Domestic Workshops ...	22
Bakehouses ... ...	57
Total number of workshops on Register ...	296

## 5.—Other Matters.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133) .....	10
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) :—	
Notified by H.M. Inspector .....	7
Reports (of action taken) sent to H.M. Inspector .....	...
Other .....	2
Underground Bakehouses (s. 101) :—	
Certificates granted during the year .....	1
In use at the end of the year .....	4

## BAKEHOUSES.

There are 57 bakehouses upon the register, 4 of which are underground bakehouses.

These premises have been carefully supervised and 10 notices served to procure compliance with the provisions of the Factory and Workshop Act, viz., 9, for limewashing, and 1 for drainage defect.

## DAIRIES, COWSHEDS, AND MILKSHOPS.

There are 60 cow-keepers and milk-sellers upon the register. Their premises have been frequently inspected, and the provision of the Dairies, Cowsheds, and Milkshops Order as to air space and ventilation, cleansing of milk vessels, &c., have been enforced.

### COMMON LODGING-HOUSES.

There are 4 licensed common lodging-houses within the City. Frequent visits have been paid to these houses both day and night, and the conditions found were generally satisfactory.

Observations were made and visits paid to several unlicensed houses, the tenants of which were suspected of taking in common lodgers. As a result of these visits 5 persons were prosecuted for keeping unlicensed houses. In 3 instances fines were imposed, in the other 2 instances the Magistrates dismissed the cases.

### VANS USED AS DWELLINGS.

All the vans entering the City to attend fairs, &c., have been inspected, in order to ascertain their sanitary condition, and also for the purpose of detecting any infectious disease which might exist amongst the inmates.

These vans on the whole were found to be in clean and tidy condition; in 2 instances only was it necessary to caution the occupants as to lack of cleanliness. The health of the inmates was very good, no case of infection occurred amongst them.

### URINALS AND GULLIES.

The urinals and gullies have received the same amount of attention as in previous years, being regularly cleansed by the staff of men employed for that purpose.

### HOUSE REFUSE REMOVAL.

13,283 loads of refuse have been collected and removed to the refuse tips and destructor, being an increase of 221 loads as compared with 1911. This increase is due to the added area, which was incorporated in November last. The refuse from houses in the City, excluding the added area, is collected from portable receptacles which are put out into the street by the householders at stated times.

From the centre and business parts of the City, and also from a number of streets and courts which contain small houses of the tenement type, the refuse is collected daily, and from the residential part twice and three times a week.

In the added area ash-pits and ashpit privies are still in existence. From these the refuse is removed about every fortnight, but as soon as an efficient sewerage scheme is provided ash-pits and privies will be abolished, and a collection instituted on the lines of that which prevails in the old part of the City.

### GARBAGE.

141 loads of garbage have also been removed from the Public Slaughter-houses by the Corporation carters.

### PUBLIC ABATTOIR AND RAILWAY SLAUGHTER-HOUSES.

Frequent visits have been paid to the Public Abattoir, which has been kept in a satisfactory condition.

The Railway Slaughter-houses have also been frequently visited and kept under careful supervision. With few exceptions they were found in a satisfactory condition.

The following table gives the number of animals killed during the years 1903-1912:—

PUBLIC SLAUGHTER-HOUSES.

Year.	Beasts.	Sheep and Lambs.	Calves.	Pigs.	Total.
1903	3,845	16,301	692	4,322	25,160
1904	4,075	16,860	759	4,753	26,447
1905	3,946	15,657	751	4,674	25,028
1906	4,059	15,274	797	4,139	24,269
1907	4,020	14,745	962	4,419	24,146
1908	3,772	14,911	760	4,064	23,507
1909	3,713	16,799	690	3,744	24,946
1910	3,562	16,491	716	3,444	24,213
1911	3,462	15,711	808	4,018	24,000
1912	3,294	15,499	653	3,993	23,439

L. & N. W. RAILWAY COY.'S SLAUGHTER-HOUSE.

Year.	Sheep.	Lambs.	Calves.	Pigs.	Total.
1911	34,197	...	...	...	34,197
1912	49,325	...	...	...	49,325

N. E. RAILWAY COY.'S SLAUGHTER-HOUSE.

Year.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Total.
1911	...	41,362	...	...	...	41,362
1912	1	48,571	...	...	335	48,907

## PUBLIC MARKETS.

The Public Markets and premises where food is prepared or exposed for sale have been regularly inspected, and the necessity of the observance of hygienic measures being taken have been constantly pointed out.

## DISEASED AND UNSOUND FOOD.

---

The following table shows the amount of food seized or surrendered as being unfit for human consumption :—

Nature of Food Condemned.					Quantity.
Beef ...	...	...	...	...	27,235 lbs.
Mutton	...	...	...	...	871 „
Veal	...	...	...	...	354 „
Pork	...	...	...	...	523 „
Rabbits	...	...	...	...	26 pairs

## FRIED FISH AND POTATO SHOPS.

There are 30 fried fish and potato shops on the register, as compared with 32 last year.

Frequent visits have been made to the premises, and cautions were in several instances administered regarding the cleanliness of the utensils used in the business.

### ICE CREAM SHOPS.

The premises whereon this article is prepared have had careful supervision. Enquiries have been made regarding the source from which the ice used in the freezing process was obtained, and attention was also given to the freshness of the articles used in the commodity.

### OFFENSIVE TRADES.

The premises whereon offensive trades are carried on have received attention, and in each case the business was found to be conducted in a proper manner.

### FOOD AND DRUGS.

During the year the articles set out in the following table have been purchased and submitted to the Public Analyst for analysis.

The following table gives articles purchased, result of analysis, and action taken :—

Article.	Number of Samples taken.	Genuine	Adulterated.	Extent and Form of Adulteration.	Remarks.
Milk	38	36	2	(a) Milk fat 0·54% below limit. (b) Non-fatty solids 0·75% below legal limit (8·5%).	(a) Formal sample. Vendor cautioned by instruction of Health Committee. (b) Do. do.
Butter	12	12	2	(a) 20% fat other than milk fat. (b) Contained only 12·90% fat.	(a) Informal sample. Another sample taken. (b) Formal sample. Vendor cautioned.
Cheese	13	11	2	...	...
Lard	12	12	2	...	...
Beer	12	12	2	...	...
Coffee	9	7	2	(a) 3% Chicory. (b) 37% Chicory.	(a) Vendor cautioned by letter. (b) Vendor proceeded against and fined 2/-6.
Sausages	8	8	...	...	...
Barley	7	7	...	...	...
Pepper	6	6	...	...	...
Rice	12	12	...	...	...
Brandy	6	6	...	...	...
Pineapple	6	6	...	All these samples contained 0·028% foreign ingredients.	Report of Analyst states that the amount is not dangerous to health.
Margarine	...	...	...	...	...
Honey	...	3	3	...	...
Number of Samples taken	...	6	6	150	138
Genuine	..	3	3		12
Adulterated	...	...	...		

### INFECTIOUS DISEASES.

252 cases of infectious diseases, excluding Tuberculous diseases, have been notified, as against 241 last year. All the cases have been investigated and reported upon to the Medical Officer of Health, and 150 cases have been removed to the hospital for isolation.

### TUBERCULOUS DISEASES.

343 cases of Tuberculosis have been investigated and reported upon to the Medical Officer of Health. Verbal and printed advice as to cleanliness, mode of living, and general hygiene was given in every instance.

### DISINFECTION.

All the houses from which cases of infectious disease were removed to hospital, and rooms in which cases were isolated at home, were either sprayed with formaldehyde or cleansed under supervision of your inspectors.

The bedding, clothing, &c., used, or which had been in contact with the infected person, was also disinfected by steam.

The following is a list of articles disinfected :—

Mattresses	...	...	...	...	...	209
Beds	...	...	...	...	...	146
Bolsters and Pillows		...	...	...	...	539
Blankets	...	...	...	...	...	321
Quilts	...	...	...	...	...	266
Sheets	...	...	...	...	...	167
Carpets and Rugs	...	...	...	...	...	231
Wearing Apparel	...	...	...	...	..	637
Miscellaneous Articles	...	...	...	...	...	403
Total	...	...	...	...	..	2,919

### HORSES.

The number of horses under my charge at the Depôt, Boustead's Grassing, is 18. 9 of these are engaged in house refuse removal, 8 are used for street cleansing purposes, and one is kept as a relief horse.

I am, Gentlemen,

Your obedient Servant,

C. W. HILL,

NUMBER AND NATURE OF VISITS MADE BY  
INSPECTOR OF NUISANCES DURING THE  
YEAR 1912.

Visits to yards, courts, lanes, and passages, &c.	7,223
Supervision visits to work in progress	... 2,743
Houses to house inspection	... ... 676
Inspection of houses under Housing, Town Planning, &c., Act	... ... ... 244
Smoke observations	... ... ... 33
Inspection of Factories	... ... ... 45
Inspection of workshops, including bakehouses	649
Inspection of premises where offensive trades are carried on	... ... ... ... 98
Inspection of fried fish, ice cream shops, and other places where food is prepared	... 521
Visits in connection with infectious disease	... 1,816
Inspection of slaughter-houses	... ... 196
Inspection of cow-sheds	... ... ... 128
Inspection of milkshops	... ... ... 94
Inspection of stables	... ... ... ... 100
Inspection of common lodging-houses	... ... 61
Inspection of vans used as dwellings	... ... 152
Inspection of refuse tips	... ... ... 76
Inspection and testing of drains	... ... ... 173
Inspection of rivers and water courses	... ... 37
Examinations of meat	... ... ... 84
Inspection of auction marts	... ... ... 55
Inspection of public markets	... ... ... 62
Number of notices served—	
(a) Informal	1,131
(b) Formal	1 } .. ... ... 1,132
Number of notices complied with	... ... ... 1,116
Number of notices not complied with at the end of year 1912	... ... ... ... 16



